

# **United States Department of the Interior Bureau of Land Management**

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## **North Elko Pipeline Project ENVIRONMENTAL ASSESSMENT**

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# **1. INTRODUCTION**

The Tuscarora Field Office (Elko District) of the U.S. Department of Interior, Bureau of Land Management (BLM) received an application in December 2011 for a grant of Rights-of-Way on public land to accommodate a proposed natural gas pipeline. Prospector Pipeline Company (PPC) proposes to construct and operate an approximately 24 mile underground natural gas pipeline, to supply natural gas from the recently completed Ruby Pipeline for delivery to the Barrick Goldstrike Mine. The pipeline, referred to as the North Elko Pipeline Project (NEPP), would be located on BLM and private lands in Elko and Eureka counties, Nevada. The proposed route of the pipeline is shown in Figure 1-1, Project Location and Figures 2-1 and 2-2.

## **1.1 Purpose and Need**

PPC's purpose would be to convey natural gas from the recently completed Ruby Pipeline for delivery to the Barrick Goldstrike Mine to replace current propane usage. The project would improve energy efficiency, reduce emissions, and provide substantial operational cost savings for the Goldstrike mining operations.

The BLM's purpose and need would be to process, review, and respond to PPC's proposed pipeline under applicable laws and regulations including the Federal Land Management Policy Act of 1976, the Mineral Leasing Act of 1920, the National Environmental Policy Act (signed January 1, 1970), and the BLM's regulations concerning Rights-of-Way at 43 CFR 2800 and 43 CFR 2880. Should BLM determine that a grant authorization would be appropriate in these circumstances, the BLM must also determine what, if any, stipulations, conditions of approval, and performance bonds should be attached to the ROW grant. Should a grant be authorized then the BLM's purpose and need becomes an obligation to ensure compliance with applicable laws and requirements during construction and operation, avoidance of undue and unnecessary degradation of the public lands during and following the project lifespan, and to ensure adequate reclamation of the public lands for future productivity.

The decision to be made by the BLM's Tuscarora Field Office would be whether or not to authorize a Rights-of-Way grant on public lands along the route of the proposed pipeline and, if authorized, what, if any, stipulations and conditions of approval should be attached to the grant.

## **1.2 Relationship to Laws, Policies, and Land Use Plans**

### **1.2.1 Federal Laws and Regulations, Federal Land Use Plan Conformance**

This EA has been prepared in compliance with the following statutes and implementing regulations, policies, and procedures:

- The National Environmental Policy Act of 1969, as amended (Public Law [PL] 91-190, 42 U.S.C. 4321 (et seq.);
- BLM NEPA Handbook (H-1790-1, 2008);
- The Mineral Leasing Act of 1920 (30 U.S.C. 181 et seq.);
- The Federal Land Policy and Management Act of 1976 (43 U.S.C. 1761 et seq.);

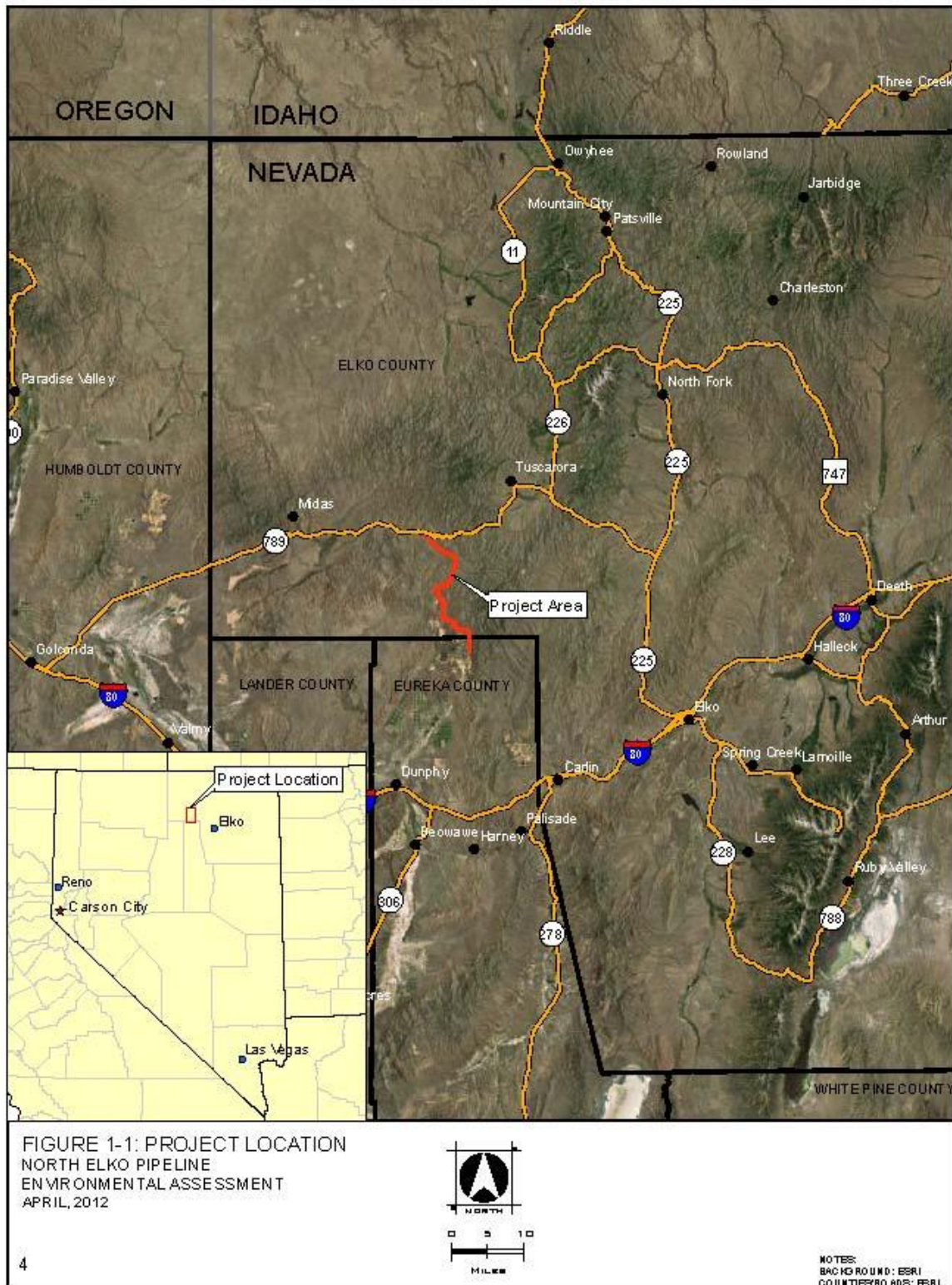


Figure 1-1. Project Location





Figure 2-1. Existing Facilities

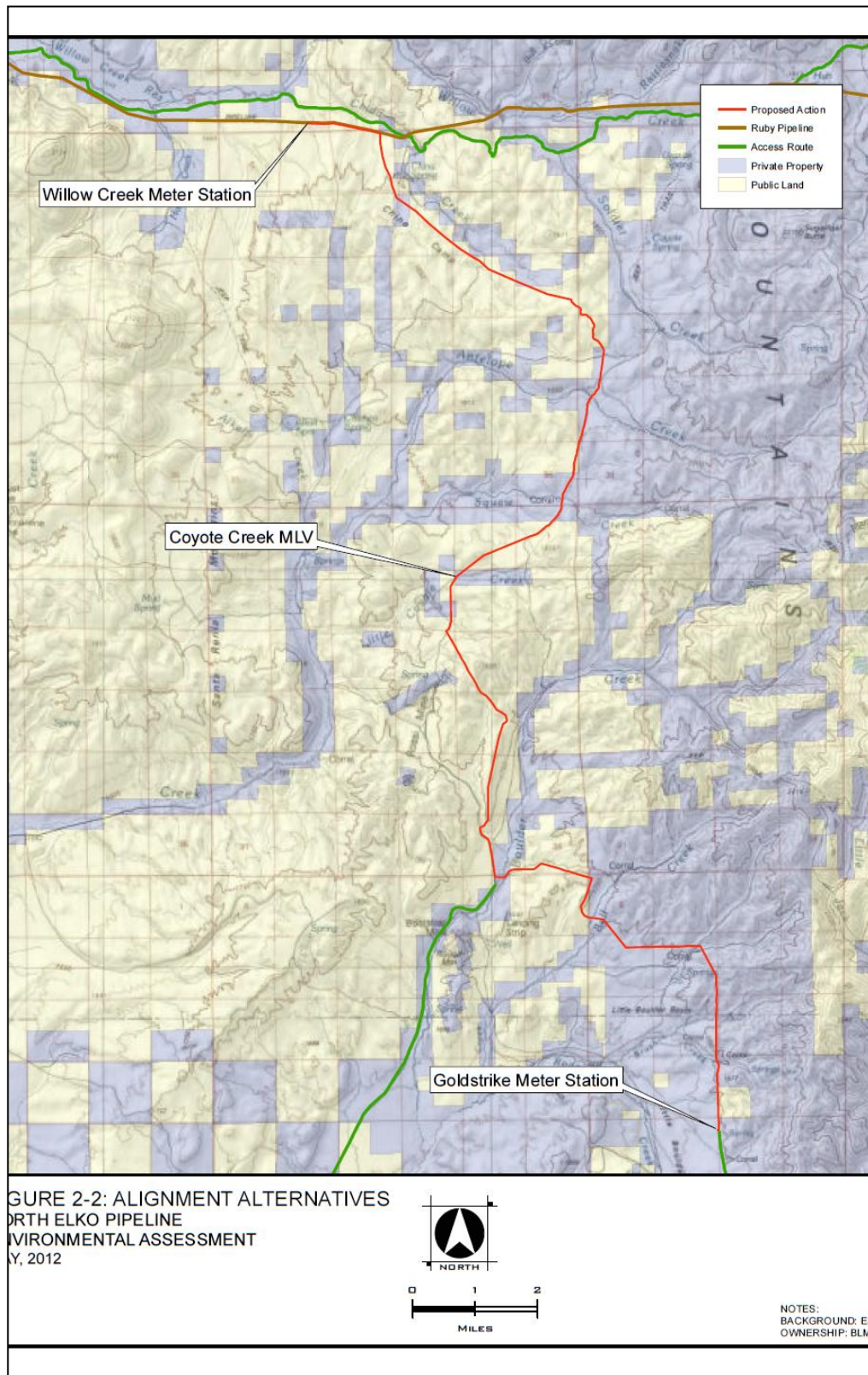


Figure 2-2. Alignment Alternatives



- 43 CFR 2800, Rights-of-Way under the Federal Land Policy and Management Act, and 43 CFR 2880, Rights-of-Way under the Mineral Leasing Act; and
- Guidelines contained in the Elko Resource Management Plan (RMP).

### 1.2.2 State and Local Government Plans and Policies

Specific approvals, permits, and regulatory requirements from state and local agencies would be required for constructing and maintaining the proposed NEPP. Table 1 - Potential Regulatory Permits Required lists federal, state, and local permits, policies, and actions that may be required for the NEPP. PPC will also comply with the applicable provisions of Nevada Revised Statutes, Chapter 533, regarding water use.

Table 1 - Potential Regulatory Permits Required

<b>ACTION REQUIRED</b>	<b>RESPONSIBLE AGENCY</b>	<b>PERMIT NAME</b>
Conditional Use Permit for above ground facilities on private property	Elko County Planning and Zoning and Natural Resources Division	Conditional Use Permit
Utility Environmental Protection Act (UEPA) permit to construct	Public Utilities Commission of Nevada	UEPA Permit
Dust permit for surface disturbance	Nevada Department of Environmental Protection (NDEP)	Bureau of Air Pollution Control Permit
Building Permit for above ground facilities on private property in Elko County	Elko County Building and Safety Office	Building Permit
Notice of Intent (NOI) Application and Stormwater Pollution Prevention Plan (SWPPP)	NDEP Bureau of Water Pollution Control (BWPC)	National Pollution Discharge Elimination System (NPDES) Permit
Permit for temporary work in waterways	NDEP BWPC	Temporary Working in Waterways Permit
Rights of Way Grant for NEPP on public land	BLM	Rights-of-Way Grant
Permits for crossing County Roads in Elko County	Elko County	Rights-of-Way Encroachment Permit

### 1.3 Issues

The primary issues analyzed in this Environmental Assessment (EA) are those identified through an internal scoping process between the interdisciplinary team selected for the project (See Preparers) and from those consulted and/or those who offered comments during project development. Examples of issues identified (for which discussion is offered within this document) include the potential impacts on wildlife and wildlife habitat, including the Greater Sage-Grouse (sage-grouse), which BLM recently received guidance (Washington Office

Instruction Memorandum No. 2012-043 (WO IM No. 2012-043)) on with specific requirements for addressing potential impacts to Greater sage-grouse. Other issues include (but are not limited to: potential impacts to cultural resources, methods to minimize disturbance to soils and vegetation along the proposed route, Project Area access routes, and the expected benefits of the pipeline.

The Nevada Department of Transportation (NDOT) District III submitted comments to the BLM regarding the use of State highways as primary access to the NEPP Project Area. NDOT's concerns were focused on the potential for road closures and requirement for special permits for vehicles delivering pipeline construction materials. PPC provided NDOT with pipeline materials information and vehicle size requirements. Based on the information provided, NDOT determined their concerns had been resolved.

## **2. PROPOSED ACTION AND ALTERNATIVES**

This chapter describes the Proposed Action Alternative and the No Action Alternative. Other recommendations discussed during project development that were not further considered as alternatives (later referred to as "Options Considered But Eliminated From Further Analysis) are described along with a brief reasoning for their elimination; i.e. routes that were initially considered, but later discarded following dialogue between the preparers and consultants for this document.

### **2.1 Proposed Action**

#### **2.1.1 Existing Facilities**

This section includes the existing above ground facilities relevant to the NEPP (Figure 2-1, above), which could be deemed "connected action(s)", are provided for disclosure within this document to comply with regulations and guidance of transparency.

##### **Ruby Pipeline Mainline Valve #24 (MLV#24):**

The proposed North Elko Pipeline Project would connect to the Ruby Pipeline at MLV#24. Mainline valves (MLV) are installed along a gas pipeline system to provide a means of isolating and maintaining pipeline sections. Spacing of MLV's along a pipeline is dictated by standards established by applicable safety codes. The valves normally are open, but when a section of pipeline requires maintenance, operators close the valves to isolate that section of the pipeline. Once isolated, the maintenance crew can proceed with their work. The MLV facility, enclosed within an 8-foot high chain link fencing, is equipped with thermoelectric power generation, remotely controlled equipment (including automated shut-off valves and mechanisms for on-site manual operation of shut-off valves and related systems), and satellite telecommunication to link MLV#24 with Ruby Pipeline's 24/7 control center.

##### **Nevada (NV) Energy Coyote Substation:**

The NV Energy Coyote Substation is a Transmission Substation located on private land approximately 7.75 miles generally south of the MLV#24 connection point. The Substation facilities are contained on approximately four acres within a six foot chain link enclosure. An

Isolation Valve for the NEPP, providing the same function as Ruby Pipeline's mainline valves, would be located in close proximity to the substation, as approved by BLM in the POD.

**Barrick Goldstrike Mine:**

The Barrick Goldstrike Mine, located at the southern end of the NEPP, would be the delivery point for natural gas from the NEPP.

**2.1.2 Proposed Action**

PPC would design, construct, test, and operate the NEPP in accordance with U.S. Department of Transportation (DOT) regulations specified in 49 CFR 191, 192, 193 and 199 "Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards" adopted by the Public Utilities Commission of Nevada pursuant to Nevada Administrative Code 704.460, and administered by the Public Utilities Commission of Nevada. 49 CFR 192 specifies pipeline material and qualification, minimum design requirements, and protection from internal, external, and atmospheric corrosion, in addition to other design standards. PPC also would be subject to other applicable federal and state regulations, including U.S. Department of Labor, Occupational Safety and Health Administration (OSHA) requirements. These regulations are intended to ensure adequate protection for the public, pipeline workers, contractors, and employees and to prevent natural gas pipeline accidents and failures.

The BLM would require that PPC prepare a Plan of Development (POD) as part of the rights-of-way grant process that meets BLM Standards and Guidelines and that is in accordance with the regulations found at 43 CFR 2884.11 prior to implementation for any activities. PPC's various construction and restoration plans are referenced in this EA and/or included in the appendices (*e.g.*, Reclamation Plan and Programmatic Agreement) also would be part of the POD.

**Description of Proposed Action:**

The NEPP would be an approximately 24 mile underground natural gas transmission pipeline, located in Elko and Eureka counties, Nevada, designed and constructed of welded steel, externally-coated, high-pressure line pipe. The final diameter of the pipeline, which would be between 8 and 12 inches, would be determined, upon completion of the final engineering design and acceptance by BLM. The NEPP would be designed for a Maximum Allowable Operating Pressure (MAOP) of 1440 psig for consistency with the Ruby Pipeline, although the actual operating pressure would be anticipated to range between 350 and 900 psig. The NEPP operating pressure would be maintained due to pressures on the Ruby Pipeline, so no compressor stations would be needed for the operation of the NEPP. To protect against external corrosion, in addition to the external coating, the pipeline would be equipped with cathodic protection equipment consisting of buried anodes, test stations, and one or more DC current rectifiers (to be identified in the POD, along with a description and location of a power source). Willow Creek Meter Station will be equipped with a single DC current rectifier (to impress current on the pipeline for external corrosion prevention), and Coyote Creek MLV and Goldstrike Meter Station would also each be equipped with their own rectifier as identified in the POD. The design of the Cathodic Protection (CP) system for the NEPP would comply with the NACE (formerly National Association of Corrosion Engineers) international standards, and be developed by a NACE-certified engineer. The CP system design would be completed and the number of rectifiers (1, 2, or 3) would be determined based on soil conditions along the pipeline.

The pipeline location would be identified with BLM and signage for surface pipeline markers post-construction would be in accordance with US DOT Code of Federal Regulations (CFR) Title 49, Part 192.707. Three above-ground facilities would receive natural gas from the Ruby Pipeline, provide safety and maintenance isolation midway along the pipeline route, and deliver natural gas to the Goldstrike Mine. The three facilities, shown on Figure 2-2 (above), are described below.

**Willow Creek Meter Station:**

The pipeline would connect to the Ruby Pipeline at MLV#24 via a new, adjacent facility that would be known as the Willow Creek Meter Station (WCMS). The WCMS would require an approximate 10,000 square foot area (approximately 0.23 acres) measuring 100 feet by 100 feet on public land immediately south of and adjacent to MLV#24. The interconnection between MLV#24 and WCMS would be effected via dual hot-taps on the MLV#24 bypass and a short segment of pipe. Pending final arrangements with Ruby Pipeline, the custody transfer of natural gas between Ruby Pipeline and the North Elko Pipeline may be designated at the hot-taps, with the point of measurement located at the WCMS. In the alternative, the custody transfer point and point of measurement may be one and the same. Equipment at the Willow Creek Meter Station location would include valves, meters, instruments, regulators, controls, computerized Remote Terminal Units (RTU's), master telemetry via satellite or other commercial means, and any other devices and appurtenances for the safe, efficient measurement, and remote monitoring and control of natural gas flows. All items would be stored as directed by BLM. The method for storage (i.e. structure), including construction, construction materials, and types of access/security would be clearly stated within the POD. Power for these devices would be generated onsite using natural gas through thermoelectric, thermoelectric/solar hybrid, or fuel cell technology. Station piping would also be designed to include a device for the launching of pipeline "pigs" for the periodic internal cleaning and/or inspection of the pipeline, as well as any equipment necessary for the cathodic protection of the pipeline from external corrosion. Such cathodic protection installation would include buried 35 pound magnesium anodes at approximate ½ mile intervals along the pipeline route immediately next to the pipeline and one to three DC current rectifier(s) as described above.

**Coyote Creek MLV Station:**

One isolation valve station would be required along the route, and would be located on private property near the existing NV Energy Coyote Substation. This station would be approximately 450 square feet in size (15 feet wide by 30 feet long for a total of approximately 0.010 acres) and would be equipped to remotely monitor the pressure of gas through the pipeline and enable the automatic, rapid shutdown and isolation of the upstream and downstream portions of the NEPP in the unlikely event of an emergency. This isolation valve may also be activated during the course of normal maintenance activity. Solar panels and/or thermoelectric generation would be used as the power source at this location.

**Goldstrike Meter Station:**

This facility would be located on private property within the Goldstrike Mine operations boundary, and would require an approximate 10,000± square foot area (0.23± acres) measuring 100 feet by 100 feet to accommodate the station piping equipment, and appurtenances needed for



the safe, efficient delivery of natural gas to the Goldstrike Mine. Such equipment may include, but not necessarily be limited to, valves, meters, instruments, regulators, controls, odorizer, computerized RTU's, master telemetry via either satellite or other commercial means, a device for the receiving of pipeline pigs, and any equipment for the cathodic protection of the pipeline from external corrosion. A small building may be installed to house some or all of the aforementioned equipment. Power for the equipment at this station would either be from the Goldstrike Mine's existing electrical infrastructure or generated onsite using natural gas through thermoelectric, thermoelectric/solar hybrid, or fuel cell technology.

### **Installation of the Pipeline:**

Pipeline installation would be much like a moving assembly line process, with sections of the pipeline being completed in stages. First, the width of temporary ROW for the pipeline would be cleared using a Brushhog where needed and bladed smooth as needed to provide a safe working surface for the installation crew. After blading is completed, 40-foot, externally-coated lengths of pipe are laid out end-to-end along the intended route within the permitted ROW boundary, a process referred to as "stringing" the pipe. The next step in the process would be for the 40-foot long pipe sections to be welded together to form longer continuous lines of pipe that are prepared for underground installation. Welds are inspected for integrity. Coating would be then applied to the welded pipe ends to complete the external coating for corrosion prevention. Specific sections of the pipe may be bent, if needed, using specialized equipment, to fit the contour of the pipeline's path. Once these continuous lines of pipe are readied, commercial trenching and excavating equipment excavate alongside the staged pipe. These trenches are typically four to six feet deep, as the regulations require the pipe to be at least 36 inches below the surface. In certain areas, however, including road crossings and where water features are present, the pipe could be buried deeper to provide additional protection for the pipe or provide for the trajectory required by alternative pipeline methods such as horizontal drilling. Road crossings may be either cased (the carrier pipe placed within a larger diameter protective pipe) or pipe with a slightly thicker wall would be utilized. Thicker walled, more heavily coated pipe may be used where water features are present. Given the soil conditions and the standards for construction, the pipe and coating must be protected against damage during and after installation. This would be accomplished by segregating the rocks from the native soil, "bedding" the excavated trench with sorted fines (i.e. soil consisting of higher clay and silts - separated from pebbles, cobbles, rocks, etc.), laying the pipe in the trench then covering the pipe with more fines to keep rocks away from the coating. After that, the remaining native soil containing the rocks would fill the trench to grade. This carefully controlled process ensures against damage to the pipe and coating during installation and afterward. Keeping the rocks at a safe distance away from the pipe during installation would help prevent any rocks from contacting the pipe during settlement.

Where suitable growth medium (i.e. productive topsoils) exists, soils would be segregated and protected (i.e. using a tactifier or other method to minimize erosion) during trenching activities, and replaced as topsoils when trenching is backfilled. If suitable growth medium is not sufficient to promote vegetative growth during reclamation, PPC will follow guidance by BLM for re-vegetation efforts (i.e. using soil amendments, etc.).

Once the pipe is welded, bent, coated, and inspected it would be lowered into the previously-excavated trenches. This would be accomplished with specialized construction equipment known

as side-booms acting to lift the pipe in a level manner and lower it into the trench. Once lowered into the ground, the trench would be filled in carefully, to ensure that the pipe and its coating retain their integrity. The last step in pipeline construction would be the hydrostatic test. This consists of filling the pipeline with water and pressurizing to a pre-determined, engineered pressure greater than MAOP to check for leaks. Water for the hydrostatic test would be obtained from the Goldstrike Mine. Water for dust abatement would be obtained from private property or the Goldstrike Mine with appropriate permission sources.

Installation of the NEPP under the proposed action would result in approximately 246 acres of disturbance in the project area, of which approximately 0.24 acre would be permanent, on public (148 acres) and private (98 acres) land. Existing and proposed disturbance is summarized in Table 2 below by existing land surface type within the study area. The study area is defined as 300 feet on each side of the centerline for the proposed action.

Within the study area the following land surface type definitions have been applied:

- undisturbed: land surface when viewed from an aerial photograph (Microsoft Virtual Earth) that currently supports sufficient vegetation cover to assign a natural vegetation community type,
- disturbed: land surface when viewed from an aerial photograph (Microsoft Virtual Earth) that is currently graded and lacks sufficient vegetation cover to assign a natural vegetation community type,
- burned: land areas that have been damaged by wildfire from 2001 through 2012 (BLM 2012a).

During construction, efforts in accordance with BLM Standards and Guidelines will be implemented, such as any protection measures identified in the POD, or halting and deferring operations in the event of heavy rains to avoid detrimental disturbance to soils, vegetation, etc.). Post construction efforts, including stabilization, will be sufficient to support equipment needed by BLM or other permitted entities in the event of an emergency (i.e. fire-fighting bulldozers, fire engines, etc.).

A list of equipment and operators/employees required to construct the NEPP is summarized in Table 3. Construction activities would be expected for a minimum of 12 weeks up to a maximum of 20 weeks.

Table 2. Disturbance Associated with the Proposed Action

Activity	Private Land (Acres)					Public Land (Acres)				
	Upland Undisturbed*	Upland Disturbed* (roads)	Upland Burned**	Riparian Habitat	Riparian Habitat Disturbed* (roads)	Upland Undisturbed*	Upland Disturbed* (roads)	Upland Burned**	Riparian Habitat	Riparian Habitat Disturbed* (roads)
Existing (Study Area)	363	32	267	12	0	635	40	405	9	0
Proposed Clearing of vegetation on staging areas (Project Area)	8	5	4	0	0	0	1	0	0	0
Proposed Clearing/ Trenching & Backfill of pipe alignment (Project Area)	46	7	26	2	0	83	14	48	2	0
Total Proposed Disturbance – 246 acres	54	12	30	2	0	83	15	48	2	0

Rounding has been used for totaling of data.

#### Sources

\*Disturbed, undisturbed upland or riparian habitat digitized using: Microsoft Virtual Earth: <http://maps.live.com>, Image courtesy of NASA, (c)Harris Corp, Earthstar Geographics LLC, Image courtesy of USGS, (c)EarthData, (c)Getmapping plc, (c)2008 GeoEye, (c)2005 Pasco, (c)GeoContent / (p)Intergraph, (c)2007 TerraItaly, (c)2007 Intermap, Image courtesy of the IndianaMap, Image courtesy of the Nevada State Mapping Advisory Committee, (c)2007 InterAtlas, (c)2008 Eurosense, (c)2008 IGP, (c)2008 IGN

\*\*Burned in 2005, small amount burned in 2011: 2012a Bureau of Land Management. Tuscarora Field Office GIS. 2011 Fires, Fire History, Received January 2012

Table 3. NEPP Proposed Construction Equipment/Operators

<b>Equipment Quantity</b>	<b>Equipment Description</b>	<b>Operators /Employees</b>
6	Semi-Truck - Pipe Delivery	4
2	Vacuum Lifter or Crane	2
2	Dozer - Blade and/or Loader	1
1	Trencher - Track Unit	1
2	Excavator - Track Unit	2
2	Backhoe	2
6	Side-Boom Tractor	4
1	Super Padder - Track Unit	1
1	Pipe Bender - Track Unit	1
4	Dump Truck	4
2	Stakebed Truck - w/Stinger	2
6	Welding Truck	12
4	Water Truck (w/cannon)	4
2	Fuel/Lube Truck	2
8	Pickup	8
<b>49</b>	<b>Subtotal</b>	<b>50</b>
	<b>Other Non-Craft Employees</b>	
	Construction Foreman	1
	Construction Inspector	2
	Site Engineer	1
	Surveyor [a]	2
	Compliance Specialist	1
	Construction Laborers [b]	10
	<b>Subtotal</b>	<b>17</b>
	<b>Total</b>	<b>67</b>

### 2.1.3 Long Term Sustainability/Reclamation

Properly designed, installed, inspected, and maintained natural gas pipelines, such as the NEPP, could have an operating life well in excess of 50 years. As the NEPP ages, the frequency of inspections and maintenance would be increased to ensure that the overall integrity of the pipeline would be sustained. Other uses for the pipeline could be evaluated in the event the operating life of the NEPP exceeds the predicted 50 year life of the mining it serves. However, for the purpose of this document, speculation beyond a reasonably foreseeable action (i.e. beyond 20 years) is not provided.

There are no reasonably foreseeable future uses at this time, but potential uses within the upcoming 20 years could include providing fuel to generate electricity, should the local electric utility determine area electrical demand warrants such power generation. Proposals for such projects would be analyzed separately at the time they are presented to BLM. Given the proximity of the southern end of the NEPP to Interstate 80, a heavily traveled truck corridor, Liquefied Natural Gas (LNG) could potentially be produced from the natural gas to serve as



motor fuel for natural gas fueled vehicles. In the event no other uses for the NEPP were developed beyond the expected mining life, the NEPP would be abandoned in place per industry standards. Abandoning in place results in no further disturbance to the environment except for removal of the above-surface facilities at Willow Creek Meter Station and Coyote Creek MLV Station. Project disturbance would be reclaimed as described in Appendix A, Reclamation Plan.

## 2.1.4 Environmental Protection Measures/Design Features

This section describes the environmental protection measures/design features that would be included in the proposed action and alternative to minimize impacts from the construction and operation of the NEPP.

### **Wildlife:**

Wildlife impacts would be minimized by Limited Operating Periods (LOPs), if or when warranted by BLM. Construction activities would not be authorized to occur within certain spatial or temporal limits during the LOPs. LOPs are designed to protect breeding adults and offspring from human-caused disturbances by minimizing the type, spatial extent, and timing of project activities permitted. Based on a proposed construction season of August 1 through November 15, construction of the NEPP would not infringe on the LOPs shown in Table 4. Proposed scheduled use of staging areas and pre-ground disturbing activities within the limits identified in Table 4 would also adhere to the applicable LOPs. Figures related to the Spatial Limits can be reviewed Section 3.4.5 (Birds).

Table 4. NEPP Limited Operating Periods

Species	Habitat Type	Limited Operating Period	Spatial Limits
Sage-grouse	Active Lek, Strutting, Nesting & Brooding	March 1 – July 31	3 miles from active lek
	PPH and PGH* Breeding Habitat and Preliminary Priority Habitat	March 1 – July 31 –	This primarily applies to the northern portion of the NEPP proposed action
Migratory birds	Nesting	March 31 – July 31	¼ mile buffer based on preconstruction nesting bird survey and follow-up surveys (if necessary)
Pygmy Rabbit	Nesting, Rearing	March 31 – July 31	Based on identification of colony boundary – preconstruction survey
Burrowing Owl	Nesting, Rearing	March 31 – July 31	Based on identification of active nests – preconstruction survey **

\* PPH and PGH: Preliminary Priority Habitat and Preliminary General Habitat as defined by NDOW, on the Sagegrouse Habitat Categorization Maps. See NDOW website(s):

<http://www.ndow.org/wild/conservation/sg/index.shtm>;

<http://www.ndow.org/about/news/pr/2012/March/sagegrouse.shtm>

\*\*Best Management Practices would be considered to minimize impacts to any active burrows used for young-rearing within 300 feet on each side of the ROW after July 31.

In the event that implementation for the proposed action is not feasible, otherwise delayed, or is not completed between August 1 through November 15, PPC will operate during the timeframes identified and approved by BLM.

At the Willow Creek Meter Station, PPC would install lightning protectors on enclosure corner posts that would also provide a deterrent from perching by birds of prey to reduce predation on sage-grouse. The selection of the Lightning Master Corporation Model PP-32 with ½ inch adjustable air terminal base #636-1/2 inch and cable clips #72A where required was done in coordination with the BLM Tuscarora Field Office Wildlife Specialist.

Length of open trench would be limited to 1200 feet at any one time at any location for the protection of wildlife species and livestock. Temporary wildlife-ramps (to allow for safe travel/migration of wildlife species and livestock) will be placed as recommended by BLM (for amount/quantity, appropriate slope, and specific locations) where trenching is not backfilled immediately (i.e. thus leaving the trench uncovered over-night).

In or near all sensitive wildlife, riparian or cultural areas, as determined in cooperation with the BLM, temporary construction fencing would be installed to limit disturbance and protect specific areas.

The Willow Creek Meter Station would be equipped with a thermoelectric generator (TEG) to provide the source of power for the electronics and monitoring telemetry. The TEG would be located at least 10 feet from all sides of the fenced enclosure to reduce the potential for starting a wildfire. PPC has selected pipeline operation and monitoring equipment to minimize pipeline operation noise to reduce the potential for impacts to sage-grouse. The selected operation and monitoring equipment would limit new noise produced to less than 8 dB at 3 feet and zero dB at 9 feet from the thermoelectric generator, which, given current knowledge, is not expected to impact sage-grouse.

#### **Vegetation Including Riparian Zones:**

Prior to construction mobilization, PPC would contract a qualified botanist to complete a pre-construction riparian habitat survey to determine the location, extent and population characteristics for noxious weed species. Based on those survey results, in cooperation with the BLM Noxious Weed Specialist, PPC would develop a site and species specific treatment plan to address noxious weeds within the NEPP project area. Treatments approved by BLM would be implemented by a certified herbicide contractor. In cooperation with the BLM Weed Specialist, PPC would conduct ground disturbing activities in a manner that includes project area pretreatment measures to preclude spread of noxious weeds from the project area to unaffected adjacent areas, and dedicated equipment to address weed affected soils in the project area.

Construction methods for the NEPP would include the following:

- all vehicles and construction equipment would be washed to remove dirt, debris and plant materials to minimize the spread of weed materials prior to entering the Project Area,
- During construction and after preconstruction weed treatment, PPC would dedicate one piece of equipment to excavate weed affected soils for stockpiling and backfill of weed-affected soils. The equipment may be used elsewhere on the project after washing.

PPC would limit the extent of surface disturbance to only what necessary and approved in the POD to construct and install the NEPP. Crossings at streams or in riparian habitat would be limited and occur where approved by BLM, to provide for safe maneuverability of equipment to construct the crossing(s), and for stream protection.

PPC would reclaim and seed all disturbed ground including upland and riparian habitat concurrent with ground disturbing activities in accordance with the Reclamation Plan (Appendix A). After, construction is done and reclamation completed, there would be no other disturbances planned during the life of the project, other than those associated with maintenance (and of which BLM will be informed).

PPC would reclaim and seed all disturbed soils surfaces concurrent with ground disturbing activities in accordance with the Reclamation Plan (Appendix A) developed in cooperation with the BLM. In addition, there would be no new disturbance within concurrently reclaimed soil surfaces. Reclaimed surfaces on public lands would be left in a roughened state with all boulders unearthed left on the surface to deter livestock and recreational vehicle use of the NEPP alignment.

#### **Construction Equipment:**

PPC has identified construction equipment necessary to effectively and efficiently complete construction and reclamation with full consideration of minimizing the surface disturbance footprint and human presence impacts to wildlife. To the extent feasible, rubber tired equipment would be used to avoid compaction or displacement of soils and vegetation along riparian areas, at approved stream crossings, or during events of high precipitation on saturated soils. Please see Table 3 above.

#### **Existing Features:**

The NEPP would maximize the use of areas already in a disturbed condition (roads and previously cleared areas) for the proposed access, staging and pipeline installation. The NEPP would confine access to the NEPP alignment (with consideration of operational buffers) for construction to that approved by BLM on public lands. Existing disturbed areas on private lands would be used for construction staging of equipment and pipeline materials). In addition, the NEPP would use two acres of public land previously disturbed by the Ruby Pipeline to access the temporary construction right-of-way within the Potential Storage Area shown on

The NEPP alignment would intersect seven existing fence lines and one cattle guard. PPC would restore each location to pre-project condition. No new gates would be built in existing fences. Other information regarding grazing can be found in Section 3.1.3 (Resources Present, but Minimally Affected).

#### **Construction Methods:**

The NEPP Proposed Action and Alternative would cross several natural water drainages. The construction methods applied for crossing these areas would depend on a combination of factors, including soil characteristics at each crossing site and whether the crossing contains flowing water or would be dry at the time of construction. Where flowing water would be present and

soil conditions warrant, construction crews would install temporary bridging within the temporary construction easement to allow for the passage of construction equipment. Where creeks and drainages are dry, PPC proposes using the open-cut method to complete the crossing. Where flowing water would be present, Horizontal Directional Drilling (HDD) or dry-ditching would be applied as field conditions permit.

**Open-Cut Crossing Method** – Conventional trenching and excavation equipment would be used to excavate in the crossing area. Once the trench would be established, the pre-bent, fabricated pipe segment would be installed and promptly backfilled. Pipe segments used for creek and drainage crossings would be weighted to prevent shifting in the event of future heavy runoff years or periods of prolonged heavy water flow.

**HDD Method** – Specialized equipment would be used to drill a generally horizontal pilot hole beneath the surface of the ground from one side of the crossing to the other. The path of the small diameter pilot hole would be at a sufficient depth under the crossing area to support the entry and exit angles for the drilling of the pilot hole. Drilling fluid consisting of water and bentonite clay would be used in a closed-loop system to lubricate the drill. Upon completion of the pilot hole, the hole would be reamed with a larger drill bit to a larger diameter sufficient to accommodate the external diameter of the pipeline. A specially prepared pipe string would be pulled back through the reamed hole from the bore exit side to complete the crossing. Once installed, the ends of the pipe string would be tied-in to the pipeline on either side of the crossing.

**Dry-Ditching Method** – Similar to the open-cut crossing method, dry-ditching in flowing water involves the diversion of the water flow around the area to be crossed utilizing a system of flumes or pumps and hoses. Once the water diversion would be established, the crossing area can be trenched or excavated as with the open-cut method. After the pipe would be installed in the trench and backfilled, the diversion would be removed and water flow restored in the original channel.

In areas where the NEPP encounters steep slopes, additional grading may be required to allow for safe construction and pipe bending. All land surfaces disturbed during construction of the NEPP would be reclaimed and seeded in accordance with the Reclamation Plan (Appendix A).

The use of commercial explosives (blasting) to aid trench excavation would only take place along the NEPP right-of-way in specific areas where the rock cannot be economically excavated by conventional means. All blasting activity would be conducted by an explosives contractor licensed by the state of Nevada and in conformity with all applicable laws and regulations governing the use of commercial explosives for excavation purposes. Explosives would be safely transported, handled, and stored by the explosives contractor and in accordance with applicable laws and standards for such activity. The proponent would notify the appropriate Elko BLM office representative at least one day prior to the day explosives are to be used in the event such BLM representative wants to be present on-site to monitor the blasting activity. No blasting would occur within 40 feet of existing structures. All blasting located along adjacent power line rights-of-way would be conducted in a manner that will not cause damage to the power company property and facilities. The blast area would be backfilled or covered by blasting mats and/or other material as needed to protect nearby existing facilities or sensitive



natural resources from thrown rock fragments.

The drilling program would be based on grid spacing sufficient to achieve the desired explosive energy ratio needed to break the rock and pull the trench. This pattern would be adjusted on a site-specific basis to compensate for different geology, nearby utilities or other sensitive areas. Delays would be used to control the vibration as well as limiting the transmission of energy below the damaging levels at any existing structure. The delay pattern would be created to provide the energy relief immediately down the trench in preference to a horizontal direction. The amount of explosive used in each hole would be limited to the manufacturer's recommendations and specifications.

All shots would be carefully designed by the explosives contractor to control flyrock. All loading activity would be supervised by the explosives contractor, who would communicate with the shot hole drillers to obtain geological information for each shot. Matting and/or padding would be utilized at the discretion of the explosives contractor. A good quality, non-bridging stemming material that completely fills any voids in the drill hole would also be used to reduce the amount of flyrock.

Following the required waiting period after each shot, the blast area would be inspected for any indication of fire or fire hazard. Particular attention would be paid to the vegetated areas outside of the right-of-way. A fire watch team would patrol each blast area for a period of one hour after the required waiting period. Normally, the explosives vaporize at the instant of detonation and there is no fiber or other material left to smolder or be a source of concern. Any plastic shock tube from the initiation system that remains after the blast would be picked up for proper disposal immediately after the blast.

Measures would be taken to exclude livestock from the blasting area, including but not limited to informing and negotiating an agreeable time with BLM and the permittee for removal of grazing livestock. During the normal safety check prior to blasting, the area will be checked for both livestock and wildlife. The blast would not be initiated until the area is clear.

### **Aesthetics:**

The fenced enclosure at the Willow Creek Meter Station would be constructed of unpainted galvanized steel to avoid reflective surfaces. The above ground pipe and meter station would be painted with the approved BLM color palette "Shale Green" to blend into the surrounding landscape.

### **Pipeline Safety Features:**

#### **On-going Operation:**

Once installation would be complete, the pipeline and facilities would be remotely monitored and operated by PPC's qualified operations personnel on a real-time, 24/7 basis utilizing SCADA (Supervisory Control And Data Acquisition) technology at the applicant's Rancho Cordova, California, Gas Control Center. Pipeline operators, utilizing the SCADA real-time operational data telemetered to the Gas Control Center, monitor pipeline flows and pressures to ensure the safe, efficient receipt and delivery of gas through the pipeline. Critical operating points are alarmed in the SCADA system to alert operators of changing pipeline conditions, as

well as provide computerized leak detection on the pipeline. Pipeline personnel would be available at the Gas Control Center and on location to provide operational support for the pipeline, and to be available to respond to routine and emergency operating conditions as needed.

**One-Call Notification:**

The pipeline would be registered with the local chapter of the national one-call system (Underground Service Alert [USA] North), which provides excavators, construction crews, and anyone interested in digging into the ground around a pipeline with a single phone number that may be called when any excavation activity would be planned. This call alerts the pipeline company, which may flag the area, or even send representatives to monitor the digging. The national number for one call is “811.”

**Emergency Response:**

PPC recognizes that emergency response may be required during construction and post-construction as part of the ongoing pipeline operations. Pursuant to Nevada Administrative Code (NAC) section 704.460, PPC would be required to maintain an approved pipeline emergency response plan for pipeline operations under the jurisdiction of the Nevada Public Utilities Commission.

During construction of the NEPP the following emergency response protocol would be applicable:

- The contractor would at all times conduct construction activities in a manner to avoid the risk of bodily harm to persons or risk of damage to any property.
- PPC would require the contractor to promptly and fully comply with safety, sanitary and medical requirements as prescribed by Federal, State or local laws or regulations.
- PPC would require the contractor to submit for approval by PPC a written Safety Program.
- The construction Foreman and Inspector(s) would be required to keep on their persons at all times a satellite telephone or other suitable communications device for notification of emergency responders.
- All construction equipment would be equipped with applicable exhaust spark arrestors.
- Fire extinguishers would be available at all work sites.
- Personnel would be allowed to smoke only in designated areas, and they would be required to follow PPC policy regarding smoking.
- The BLM Elko District Office (775-753-0200) would be notified of any wildland fire, even if the available construction personnel are able to address the situation or the fire poses no threat to the surrounding area. In addition, the Elko Interagency Dispatch Center would be notified (775-748-4000).
- A list of emergency phone numbers would be maintained at all work sites.
- All construction vehicles would carry a shovel and conventional fire extinguisher.
- Vehicle catalytic converters (on vehicles that enter and leave the project area of a regular basis) would be inspected often and cleaned of all flammable debris.
- All cutting/welding torch use, electric-arc welding, and grinding operations would be conducted in an area free, or mostly free, from vegetation. An ample water supply and shovel would be on hand to extinguish any fires created from sparks. At least one other person in addition to the cutter/welder/grinder would be at the work site to promptly

detect fires created by sparks.

- All construction personnel would be responsible for being aware of and complying with the requirements of any fire restrictions or closures issued by the BLM, as publicized in the local media or posted in the field or on the Elko BLM District website.

#### **Inspection of the Pipeline:**

Post construction, the NEPP would require annual visual inspections of the pipeline route in its entirety. Each visual inspection would include the required annual leak detection, pipeline marker inspection, and cathodic protection inspection and testing. These inspections are non-invasive and cause no greater disturbance than driving or walking the pipeline corridor. PPC would use existing roads to perform required inspections to the extent possible. Where existing roads do not allow visual inspection, the inspector would walk that portion of the pipeline to complete the required visual inspection. In addition, PPC would notify the BLM of the annual inspection date two weeks prior to the scheduled inspection and invite BLM personnel to accompany the inspector.

### **2.1.5 Impact Compensation Measures – Greater Sage-Grouse**

For the Tuscarora Field Office (TFO) to have the option to issue a decision granting a rights-of-way to PPC for the proposed pipeline, the TFO and Nevada Department of Wildlife (NDOW) must agree that the proposed project, including compensation measures, will “cumulatively maintain or enhance sage-grouse habitat” as required by WO IM No. 2012-043. The guidelines that NDOW uses for compensation for impacts to sage-grouse habitat come from “Energy and Infrastructure Development Standards to Conserve Greater Sage-grouse Populations and their Habitats” which is available on the NDOW website. Very briefly, those guidelines recommend restoration work on three times as much acreage as disturbed in PPH (NDOW Categories 1 and 2) with a value of \$600 per acre.

With that information in mind, it has been determined that the proposed project would disturb 119 acres of intact PPH sage-grouse habitat and 4 acres of intact PGH sage-grouse habitat. At ratios of 3:1 for PPH and 2:1 for PGH, PPC would have an obligation to restore 365 acres at a cost of \$600 per acre for a total cost of \$219,000. As would be described in detail in a Cooperative Agreement among BLM, NDOW, and PPC, PPC would be obligated to spend that amount on the following types of habitat improvement activities:

- Collection of local area sage brush seed in the fall of 2012
- Seeding containers with the collected sage brush seed
- Planting the seedlings on lands damaged by the Esmeralda Fire along the ridge between China Creek and Soldier Creek at a maximum rate of 435 seedlings per acre
- Cultural surveys on the acreage to be planted and avoidance of any cultural resources

It is estimated that approximately 500 to 600 acres could be planted with sage brush seedlings for the total cost of \$219,000. The amount of seed to be collected, the acreage to be planted with seedlings and the timing of the project work would be determined, as set forth by the aforementioned Cooperative Agreement, by representatives from PPC, NDOW, and the BLM. This work would satisfy BLM’s requirement under WO IM No. 2012-043.

### **2.1.6 Connected Actions**

One of the single most important considerations influencing the design of the NEPP would be the availability of an operating natural gas “inventory reserve” for balancing gas supply with the actual gas usage, and to maintain a reliability factor for the consumer, Goldstrike Mine. Inventory reserve would be a function of internal pipe diameter and length, which determines internal pipe volume, and the pressure at which the pipeline would be operated. This simple principle establishes the basis upon which a pipeline company can manage its operating inventory reserve to buffer operational swings (routine increases and decreases in gas usage) and maintain a reliability factor for the gas consumer in the event there would be an unplanned interruption in gas flow from the gas source. An unplanned interruption of gas from the Ruby Pipeline would bring the reliability factor into play on the NEPP.

At present, the Goldstrike Mine has on-site propane storage inventory, which would be regularly replenished by propane tanker trucks to help maintain a reliability factor. The purpose of the reliability factor for the NEPP would be to provide the same type of operational reliability to the Goldstrike Mine as on-site propane storage. There would be no tangible planned future use for the NEPP except to deliver natural gas to the Goldstrike Mine and provide reasonable inventory reserve for reliable operation.

PPC would provide BLM all regulatory and legal documents (i.e. Right-Of-Way grants by participating private land owners, etc.) that could be considered to have connect-actions to receive approval before project implementation and will continue to provide BLM with additional documents prior to their expiration dates, or will proceed as defined in the approved POD.

## **2.2 Alternatives**

Feasible options (or preliminary alternatives) for the proposed action were developed into the Proposed Action Alternative and the No Action Alternative. Several other options were considered during project development, but eliminated from further analysis for one or more reasons as described below, authorized via 40 CFR 1502.14 and BLM NEPA Handbook H-1790-1, Chapter/Section(s) 6.4.1 and 6.4.2 (2008).

### **2.2.1 No Action Alternative**

Under the No Action Alternative, the BLM would not authorize a ROW grant for the NEPP on public lands. Since the pipeline must cross public lands, no pipeline could be constructed if BLM does not authorize a grant.

### **2.2.2 Alternatives (Options) Considered But Eliminated from Further Consideration**

#### **Maggie Creek Road:**

An alternative that would connect the NEPP at Ruby Pipeline’s Main Line Valve #23, and run eastward, less than 100 yards, to the Maggie Creek Road, then south along Maggie Creek Road, an Elko County maintained road, and at some point turn westward to cross the Tuscarora Mountains to the Goldstrike Mine was briefly considered for the purpose of minimizing new



disturbance.

Dialogue within the interdisciplinary team and consultants for the project determined that the suggested route would:

- traverse far more preliminary priority habitat (PPH) and preliminary general habitat (PGH), as defined by NDOW in their habitat categorization maps for sagebrush habitat, over the proposed action alignment,
- cross one or more streams that currently support Lahontan cutthroat trout, a federally listed threatened species,
- likely be impractical to build across the crest of the Tuscarora Mountains due to shallow soil depths,
- add an additional approximate 4.4 miles to the overall alignment, and
- be impractical because Ruby Pipeline would not permit a connection by PPC at any location other than MLV#24.

#### **NV Energy ROW:**

The use of the NV Energy transmission line ROW was investigated as it represented an opportunity for no new disturbance along approximately 1.7 miles of the NEPP alignment. Analysis of this alternative was terminated when PPC was informed by NV Energy Land Operations Manager that NV Energy polices do not permit co-use of their easements. This policy is founded on safety and maintenance considerations related to the underground pipeline. NV Energy does not object to locating the NEPP just outside of the NV Energy ROW and crossing the ROW where necessary. For this reason, co-location of the proposed NEPP within the existing disturbance of the NV Energy ROW was eliminated from further analysis.

#### **China Creek Two Track Alternative:**

The China Creek Two Track Alternative is an alternative that would have replaced approximately three miles of the northern portion of the Proposed Action. The alternative would have used an existing, but overgrown two-track along the China Creek drainage. The alternative resulted from a concern about the impacts to intact sage grouse habitat that would occur if the pipeline were built as proposed. An additional consideration was the possibility that vegetation would recover more quickly from construction in the lower and wetter areas along the China Creek drainage compared to the proposed action. This alternative was eliminated from further consideration after specialists determined that the alternative not acceptable because:

- 1) of the presence of pygmy rabbit colonies along the northern part of the project boundary,
- 2) of the expected disruption to near surface water flows from construction, and
- 3) overall impacts to valuable riparian habitat within the project boundary.

#### **SpiderPlow©:**

A construction method alternative that would minimize the disturbance footprint for construction was suggested by a prospective pipeline contractor. In response, PPC investigated the SpiderPlow© technology to determine if it would meet the NEPP design criteria standards regulated by the Department of Transportation (DOT)(CFR Title 49, Parts 191, 192 and 199) for suitability of alternate pipe type and this technology with welded steel pipe, and soil conditions and construction requirements.

Due to DOT standards and the Maximum Allowable Operating Pressure which must be consistent with that of the source pipeline (Ruby), composite pipe and High Density Polyethylene (HDPE) do not meet the design criteria for pipe diameter for the NEPP.

In addition, soils along the NEPP alignment are generally loosely consolidated sandstone to exposed bedrock with a high probability of being cobbly to stony. As discussed above, PPC has selected excavation equipment with full consideration of the soil conditions and compliance with DOT standards that the pipe and protective coating must be protected against damage during and after installation. The SpiderPlow© technology excavates, “pulls in” the pipe, and backfills in one pass. The technique does not allow for curves and bends in the pipe, rocky soils and soil segregation, or visual inspection of the pipe integrity as it would be installed. In addition, after the pipe would be pulled in, “bell holes” would need to be excavated adjacent to the pipe trench to allow for welding of pipe sections. Bell holes need to be large enough to accommodate safe welding and be OSHA compliant. The restrictions on pipe type, visual inspection of pipe integrity, additional disturbance related to numerous bell hole excavation locations, and the increased incremental cost for construction using the SpiderPlow© technology make this alternative non-feasible.

### **3. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES FOR THE PROPOSED ACTION AND THE ALTERNATIVES**

This section describes the resources not affected or minimally affected by the Proposed Action and Alternatives, the affected environment for the proposed North Elko Pipeline Project (NEPP) area; and the direct and indirect impacts associated with the Proposed Action and No Action Alternative.

The proposed NEPP would be located along the western side of the Tuscarora Mountains within the Willow Creek Valley-063, Rock Creek Valley-062, and Boulder Flat-061 hydrographic basins (Figure 3-1).

North-trending mountains and hills are bisected by perennial and intermittent drainages and colluvium and alluvium dominated basins. In the area, elevations range from about 6470 feet (amsl) at a mountain peak west of St. Johns Ranch in the higher country to a low of approximately 5460 feet (amsl) at Boulder Creek.

In the following sections, “Project Area” refers to land associated with the application for a grant of Rights-of-Way on public lands. The Project Area encompasses an 80 foot right-of-way on public land, and a 75 foot right-of-way on private land, totaling about 229 acres. The “study area” refers to land associated with resources and resource uses analyzed in this Environmental Assessment. The study area is 600 feet wide; 300 feet on each side of the centerline of the Proposed Action and Alternative alignment segment for a total of about 1763 acres. A 600 foot wide study area was selected based on that which could most clearly portray the resources and resources uses that may potentially be affected by the Proposed Action and Alternatives analyzed in this EA.

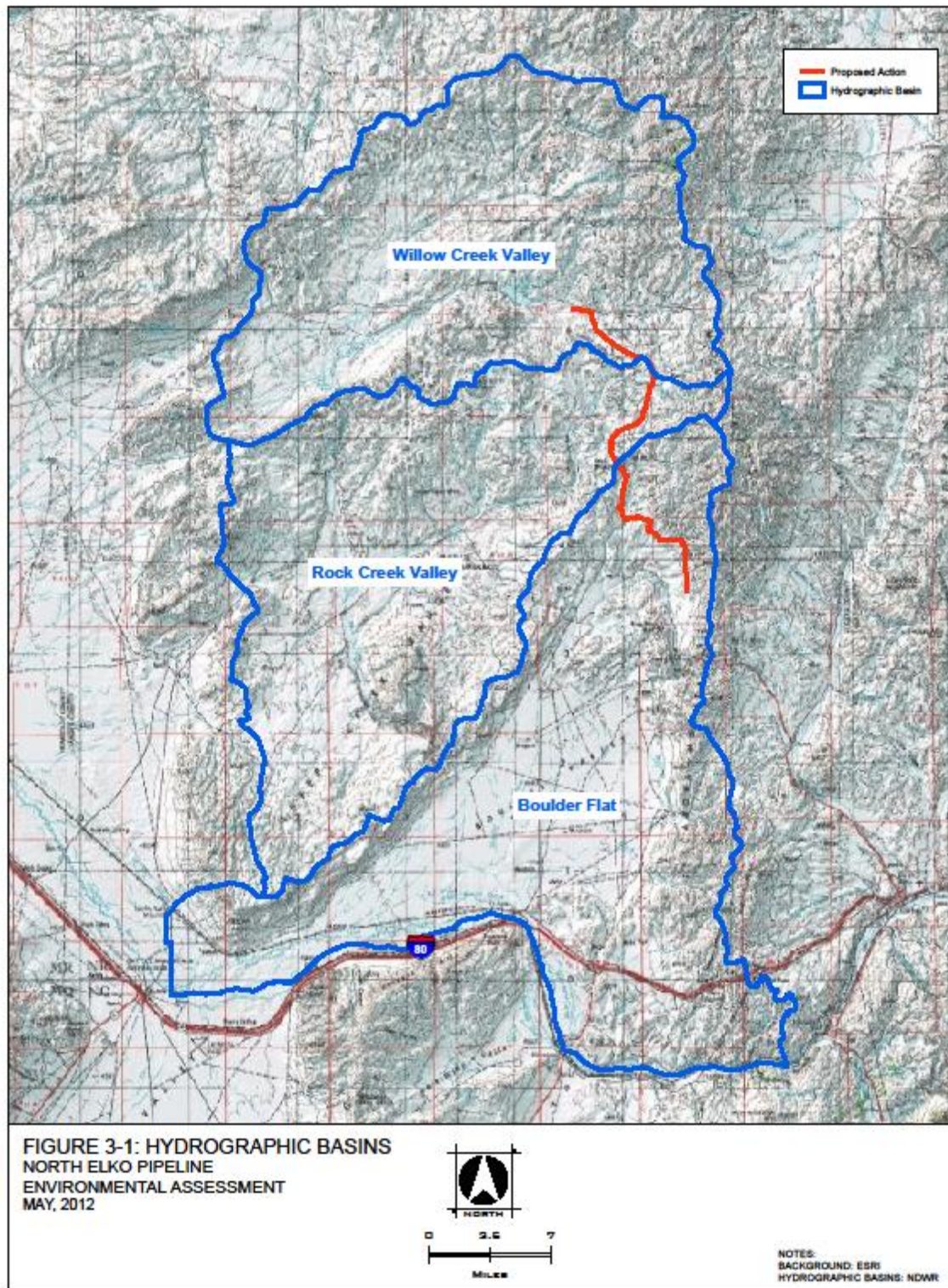


Figure 3-1. Hydrographic Basins

The surface disturbing impacts of the project have two categories of temporal impacts. The great majority of impacts are considered temporary. They would be impacts due to use of access routes and ground disturbance as the pipeline route is excavated and the pipeline installed. Reclamation would occur immediately after completion of the pipeline and the vegetation would be restored as quickly as precipitation allows. The other category is long term, which, in this case is estimated at approximately 30 years – the expected lifetime of the Goldstrike Mine, the only user of natural gas from the pipeline. Long term impacts would result primarily from ongoing operations. They include a low level of noise from equipment at the three surface stations, maintenance and safety inspections, and the physical presence of the three surface stations.

Baseline information presented in this chapter was obtained from BLM approved peer-reviewed sources, published and unpublished material (i.e. white-papers, etc.), discussions with federal, state, and local agencies, field studies conducted in the project area, experience of the Preparer's and PPC personnel's experience with construction and operation of natural gas pipelines. The affected environment for individual resources was delineated based on the potential direct and indirect environmental impacts for the proposed NEPP.

BLM has analyzed and continues to analyze potential impacts that could result from the Proposed Action and No Action Alternative. Ongoing field studies include a Class III Cultural Resources Inventory, ethnography survey for Native American interests, and surveys for noxious weed species, wildlife, riparian habitat characteristics and surface flow attributes in certain parts of the Project Area. PPC has contracted with qualified specialists to complete these field surveys.

### **3.1 Negative Declarations**

Through the interdisciplinary process for this project, the following resources and their associated uses have been evaluated for potential impacts from the Proposed Action and the No Action Alternatives.

#### **3.1.1 Resources and Resource Uses Not Present and Not Affected**

- Areas of Critical Environmental Concern (ACEC)
- Environmental Justice
- Floodplains (designated by the Federal Emergency Management Agency)
- Forestry
- Human Health and Safety
- Prime or Unique Farm Lands
- Wastes- Hazardous or Solid
- Wild and Scenic Rivers
- Wilderness
- Wild Horses and Burros. There are no Herd Management Areas or wild horses in the area.
- Woodland Products
- Paleontological Resources. No vertebrate paleontological resources are known to occur or expected considering the geology within this general area.

- **Land with Wilderness Characteristics:** The Project Area was evaluated for wilderness characteristics in 1979. The Inventory Unit polygons identified and inventoried in 1979 are: NV-010-122, Willow Creek South; NV-010-210, Checkerboard; and NV-010-211, Wilson. At that time it was determined that the Project Area and adjacent surrounding areas did not meet the criteria for Wilderness Characteristics or designation for wilderness because:
  - NV-010-122, Willow Creek South. The public recommended that the area be dropped from further wilderness study. The BLM concurred with the recommendation because of the heavy mining active in the area.
  - NV-010-210, Checkerboard. None of the public lands, other than a few acres described elsewhere occur in areas of more than 5,000 acres each. In fact, most are the size of a single section (640 acres). None of these lands are in areas of sufficient size as to make practicable its preservation and use in an unimpaired condition.
  - NV-010-211, Wilson. None of the public land in the blocks of less than 5,000 acres is of sufficient size as to make practicable its preservation and use in an unimpaired condition. Considering the 1979 inventory and subsequent disturbance, the BLM has determined that the project area does not contain lands with wilderness characteristics.

### **3.1.2 Resources and Resource Uses Present, But Not Affected**

#### **Fire Management:**

Construction and operation of the NEPP would not restrict emergency response in the case of a wildfire during construction. The NEPP would disturb approximately 78 acres of burned upland on public and private lands. Land surface disturbed by construction of the NEPP would be reclaimed in accordance with the Reclamation Plan (Appendix A) developed in cooperation with the BLM. Reclamation includes a proposed fire break seeding near the Barrick Goldstrike Mine (Appendix A: Figure A-1.).

#### **Recreation:**

There are no established recreation trails, campsites, or parks in the vicinity of the project area. Recreational access is along the Midas-Tuscarora Road, and Dunphy Road. These roads would remain open under the Proposed Action and Alternative. Recreational use in the vicinity of the Project area is moderate and dispersed and consists mostly of hunting and sightseeing.

#### **Water Quality – Groundwater:**

Construction of the NEPP would limit excavation of the pipe trench to a maximum of approximately six feet below existing ground surface. Based on the limited depth of excavation, NEPP does not expect to encounter or impact groundwater during construction or operation.

### **3.1.3 Resources Present, But Minimally Affected**

#### **Air Quality:**

Vehicle travel to and from the Proposed Project and trenching activities would temporarily result in fugitive dust. PPC would water construction areas and access roads as needed to minimize fugitive dust during construction.

Given the size and scope of the Proposed Action, vehicle and construction equipment emissions



during construction activities are not likely to approach a substantive quantity.

**Noise:**

Noise levels associated with the Proposed Action, based on previous experience(s) in construction of natural gas pipelines, are not expected to result in a significant impact to human life within the environment. Per the Ruby Pipeline Final EIS, the increase in noise level at MLV#24 as a result of pipeline operation is 4 to 8 dB attributed to a Model 8550 thermoelectric generator (TEG).

With regard to BLM's commitment to comply with guidance in WO IM No. 2012-043 to consider impacts to the Greater sage-grouse, the Tuscarora Field Office views any increase of less than 10dB in active sage-grouse strutting and brooding habitat as having no substantive impact.

The only equipment required for operation of the proposed NEPP Willow Creek Meter Station that has potential for generating noise on public land is a TEG. The Willow Creek Meter Station, including the TEG, would be located approximately twenty feet to the south of the Ruby Pipeline Main Line Valve 24 (MLV#24). PPC has selected pipeline operation and monitoring equipment to minimize pipeline operation noise. PPC's Model 8550 TEG, located at least 10 feet from all sides of the fenced enclosure would provide the source of power for the electronics and monitoring telemetry at the Willow Creek Meter Station. This TEG model would limit new noise emissions to less than 8 dB at 3 feet, and 0 dB at 9 feet of the TEG.

The 4 to 8 dB attributed to the existing Ruby MLV#24 or the level of 0 dB at 9 feet for the proposed NEPP TEG at the Willow Creek Meter Station would not exceed the recommended threshold of 10 dB over the ambient noise level.

Methods for informing the public, which could also alert wildlife and livestock in the area (i.e. series of escalating horn blasts accepted during blasting) would be identified and stated in the POD, and approved by BLM. Noise impacts are therefore expected to minimal, resulting in no harm to the overall environment.

**Grazing and Range Improvements:**

The NEPP alignment lies within a portion of the Tuscarora Allotment, the Twenty Five Allotment, and the T Lazy S Allotment that currently include a total of approximately 62 acres of existing disturbed land surface types attributed to roads and wildfire affected areas in the project area on public lands. New ground disturbance associated with project construction within each allotment on public lands would be approximately 16 acres, 66 acres and 3 acres, respectively. The Proposed Action includes provisions to reclaim and seed the disturbed areas within the same construction season. The Proposed Action may cause minor disruptions to livestock movement depending on the timing of construction and timing of livestock use, but would not result in a reduction in grazing or loss of AUMs. Operation and maintenance of the pipeline would not require any extensive future ground disturbing activities.

In addition, along the Proposed Action alignment, one cattle guard and seven fences would be temporarily affected during construction. The Proposed Action includes restoration to pre-

existing condition (no new gates on ROW) for each of the range improvements that would be temporarily affected during construction. Operation and maintenance of the pipeline would not impact any range improvements. PPC would coordinate with the livestock operators regarding timing for these temporary effects during construction and minimize inconvenience to the extent practical.

### **Soils:**

Soils within the NEPP study area are dominated by well-drained soils on mountains and hills, with some well-drained soils on high terraces and alluvial fans, and a minor amount of area with well-drained soils on low terraces and alluvial fans (NRCS 2006). The Proposed Action includes provisions to concurrently reclaim and revegetate the disturbed areas to minimize loss of the soil resource. During construction, water trucks would be employed to minimize loss of soil as a result of fugitive dust. Following construction, operation and maintenance of the pipeline would not require any extensive future ground disturbing activities.

Reclamation and revegetation of the soil resource would be completed in accordance with the Reclamation Plan developed in coordination with the BLM (Appendix A).

### **Water Quality – Surface Water:**

The Proposed Action alignment would require nine crossings of natural drainage features that in all likelihood will be dry during construction (August 1 through November 15). The width of disturbance required at each drainage feature crossing would be approximately 50 linear feet. Chapter 2 of this EA describes detailed installation and maintenance measures to protect surface water quality when crossing drainages. The Reclamation Plan (Appendix A) provides for concurrent stabilization and reclamation of disturbed ground surfaces including riparian and live water habitats. Considering the expected dry drainages and provisions in the Proposed Action minimal impact to surface water quality is expected. Operation and maintenance of the pipeline would not impact surface water resources.

## **3.2 Past, Present, and Reasonably Foreseeable Future Actions and Cumulative Effects Analysis**

### **3.2.1 Introduction**

This section describes the past, present, and reasonably foreseeable future actions that, when combined with the Proposed Action, would result in cumulative effects. Cumulative effects are defined as “the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.” (40 CFR 1508.7).

Past actions are typically described in general terms without listing or analyzing the effects of individual past actions. Present actions are actions that are ongoing at the time of the analysis. Reasonably foreseeable future actions are those for which there are existing decisions, funding, formal proposals, or which are highly probable based on available information.



The cumulative effects analysis assesses the new impacts associated with the NEPP combined with the existing and future impacts for past, present and reasonably foreseeable future actions. In this EA, the cumulative impacts are discussed in the section for each resource. If the NEPP would have no measurable direct or indirect effects on a resource, that resource was not analyzed for cumulative effects. The NEPP would or could have measurable impacts on the following resources. Therefore, this EA includes a cumulative effects analysis for each of these resources.

Cultural Resources

Noxious Weeds

Wildlife – Mule Deer

Candidate Species – Greater Sage-Grouse

Vegetation – Riparian Habitat

The geographic scope of each cumulative effects analysis is defined by a Cumulative Effects Study Area (CESA). CESAs are specific for each resource evaluated. The time frame for the cumulative effects analyses is 30 years, the anticipated period during which PPC will provide natural gas to Barrick Goldstrike. Based on the current Plan of Operations for Barrick Goldstrike, mineral mining and processing operations will cease within 30 years as ores are exhausted - at which point the pipeline would cease to operate and its surface facilities would be removed and reclaimed.

### **3.2.2 Past and Present Actions**

The important past and present actions that have had and/or are having impacts to the five resources mentioned above include grazing, wildfire, wildfire restoration, mineral exploration and mining, rights-of-way actions, and recreation including hunting. Minor past or present actions or actions with indeterminable impacts could include climate change, wildlife usage patterns, pollution, and vegetation manipulation including herbicide spraying. These minor or indeterminable impacts actions are believed to involve such small acreages or have such small or uncertain impacts that they are not considered as needing additional analysis for cumulative impacts.

There have been several fires affecting the general area, which includes the 1.3 million-acres within the Tuscarora Field Office area. These fires included the 2005 Esmeralda Fire; the 2006 Sheep, Snow Canyon, and the Amazon Fires; the 2007 Taylor and Willow Creek Fires, and the 2011 Indian Creek Fire (BLM, 2012a).

Ongoing mining projects in the immediate area of the Proposed Action include the Rossi Mine (a barite mine); the Hollister Mine (an underground gold mine with some surface facilities); the Dee Gold Mine (an open pit gold mine), which is currently in reclamation; and the Goldstrike Mine (a gold mine which includes both underground and open pit operations).

The Ruby Pipeline, a major east-west natural gas pipeline was completed in 2011 (Figure 2-1, above). Post-disturbance construction has been recontoured and revegetation is ongoing, with monitoring results of “excellent first year growth observed” in the fall of 2011.

Other existing facilities that have impacts to resources analyzed in this EA include the Oreana to

Hunt, Idaho 345kV transmission line, the Coyote to Bazza 120kV transmission line, the Valmy to Falcon 345kV transmission line, the Ormat Tuscarora Geothermal Project including 120kV transmission line, Newmont's Midas Mine, the abandoned Brigham City to Chico, CA ATT fiber optics line (ROW still visible), the Big Six Communication Site, and power line systems in Boulder Valley associated with Carlin Trend mining operations.

### **3.2.3 Reasonably Foreseeable Future Actions**

Reasonably foreseeable future actions that could contribute to cumulative impacts during the lifetime of the North Elko Pipeline Project include continued grazing, wildfire, and mining projects. Existing disturbed areas on private lands would be used for construction staging of equipment and pipeline materials (See Figures 3-2.1 below. Additional photos, with focus on multiple points displayed on Figure 3-2.1 are available in Appendix through 3-2.14). NEPP would use two acres of public land previously disturbed by the Ruby Pipeline to access the temporary construction right-of-way within the Potential Storage Area shown on Figure 3-2.2.

Three expansions of current mines are being reviewed by the Tuscarora Field Office. They are the Rossi Mine Expansion Project, Arturo Mine Project, and the Hollister Underground Mine Project (Figure 3-3). Each of these actions is described below.

#### **Rossi Mine Expansion Project**

The BLM expects a proposed Rossi Mine Expansion Project to be submitted in the fall of 2012. The project would be located approximately eight to ten miles north-northwest of the Goldstrike Mine. The project is expected to propose an additional 178 acres of surface disturbance to the existing 407 acres of surface disturbance created at the Rossi Mine for a total disturbance of approximately 585 acres. An earlier version of the expansion (the proposal continues to change as development moves forward) was addressed in the cumulative effects analysis for the Betze Pit Expansion Project Draft SEIS (BLM, 2008b). A new Draft EIS is expected to provide an environmental analysis of the project when it is formally submitted to the BLM.

#### **Arturo Mine Project**

The proposed Arturo Mine Project would be an expansion of the existing Dee Gold Mine that is currently in reclamation and closure. The project is located approximately six miles north-northwest of the Goldstrike Mine, near the northern end of the Carlin Trend. This project would be developed primarily on public lands that consist of existing authorized mining disturbance, reclaimed authorized mining disturbance, and undisturbed land, and private lands controlled by Barrick-Dee Mining Venture. The project would disturb a total of 2,774 acres of public and private land including 270 acres of existing disturbance, 542 acres of reclaimed mining disturbance, and 1,962 acres of new land disturbance. The Arturo Mine Project DEIS is expected to be completed in 2012 and then available at the BLM Elko District Office.

#### **Hollister Underground Mine Project**

The proposed Hollister Underground Mine Project would expand existing underground exploration activities to a full-scale producing underground gold and silver mine, including the development of new facilities and expanded surface exploration. The project is located in the northern end of the Carlin Trend, within Elko County, Nevada, approximately 14 miles northwest of the Goldstrike Mine, just north of the Rossi Mine. The project is 47 miles



Figure 3-2.1. Overview of Existing Disturbance within the Study Area. (Also See Appendix D)



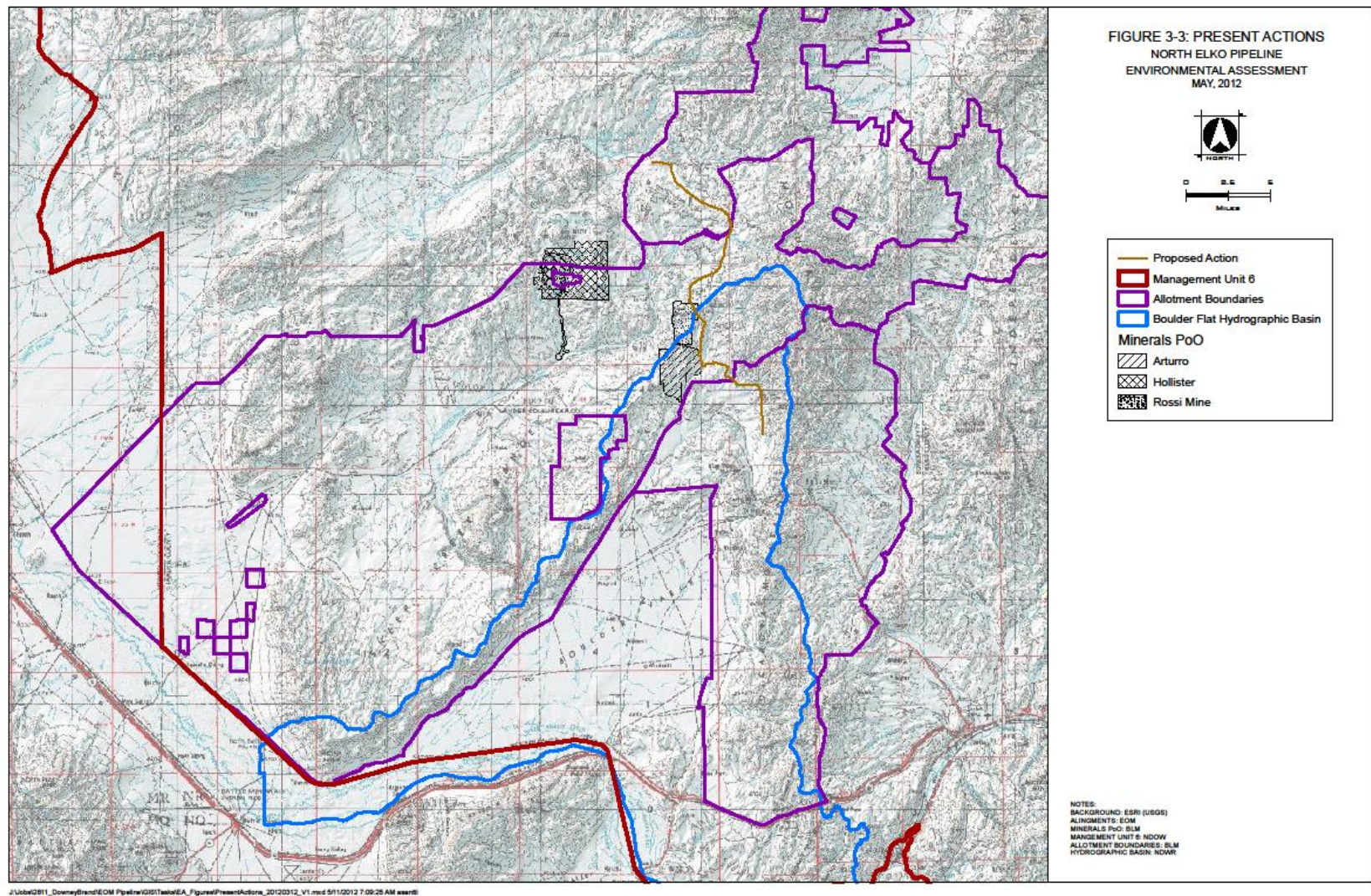


Figure 3-3. Present Actions

northwest of Elko, 38 miles northeast of Battle Mountain, and 64 miles northeast of Winnemucca, Nevada. A total of 80.2 acres of public land administered by the BLM and 10.8 acres of private land are included in the project footprint. The 91 total acres includes 58.8 acres of previously disturbed lands and 32.2 acres of new disturbance. The project area includes the proposed surface and underground exploration areas and the main project facilities. As part of the proposed project, the surface exploration program would be expanded from the existing authorized 25 acres to 50 acres within the project boundary. A Draft EIS for the project is expected to be completed in April 2012. A new power line to serve the mine is part of the proposed operation.

### **3.3 Risk of Accident/Rupture**

More than 2.4 million miles of natural gas pipelines crisscross the United States serving over 177 million Americans and providing the safest means of transporting natural gas from point to point. These pipelines are designed, constructed, operated, and maintained according to the standards and requirements of the Federal government commonly referred to as the U.S. Department of Transportation (DOT) Natural Gas Pipeline Regulations, published in the Code of Federal Regulations (CFR), Title 49, Parts 191, 192, 193 and 199 “Transportation of Natural and Other Gas by Pipeline: Minimum Federal Safety Standards”. While pipeline operators like PPC typically make significant investments in pipeline safety with the objective of protecting persons and property from injury and damage, and the industry as a whole has maintained an excellent safety record, accidents and incidents do occur from time to time. See details for the U.S. at:

[http://primis.phmsa.dot.gov/comm/reports/safety/SerPSIDet\\_1992\\_2011\\_US.html?nocache=2497#\\_ngtrans](http://primis.phmsa.dot.gov/comm/reports/safety/SerPSIDet_1992_2011_US.html?nocache=2497#_ngtrans)).

Although incidents have occurred with other gas and liquids pipelines in the U.S. during the same time period, discussing the potential for accident or rupture of gas transmission pipelines provides the most appropriate comparison when evaluating the safety of the NEPP, which is classified as a local gas transmission pipeline.

The most recent high-profile significant gas transmission pipeline incident occurred on September 9, 2010, when a pipeline operated by Pacific Gas and Electric Company (PG&E) in San Bruno, California, ruptured, producing a 72-foot long by 26-foot wide crater and resultant fire that claimed the lives of 8 people and destroyed 38 homes. The National Transportation Safety Board (NTSB) investigation and report concluded that quality control and substandard welding practices on the 1956 vintage pipeline known as Line 132 were the most probable cause for the rupture, which occurred shortly after 6:00pm when a higher-than-normal operating pressure excursion developed upstream on the PG&E-controlled system. Lack of automation on mainline block valves in the vicinity of the incident allowed gas to continue to escape and feed the fire for 95 minutes after the rupture occurred. (link provided: [http://www.nts.gov/investigations/reports\\_pipeline.html](http://www.nts.gov/investigations/reports_pipeline.html)).

The NTSB report indicated that deficient quality control by PG&E during the initial construction allowed 6 short pipe sections, known in the industry as “pups”, to be welded together end-to-end rather than use a single, longer (commonly 20 or 40-foot “joints”) section of pipe. The welds that joined the pups were shown to be deficient, thereby being the probable cause of rupture of the pipeline when exposed to higher than normal pressures.



PG&E's Line 132 in San Bruno was constructed in 1956, prior to passage of the first federal pipeline safety statute, the Natural Gas Pipeline Safety Act of 1968. The CFR Title 49 Minimum Federal Safety Standards were adopted to implement the 1968 Act. (35 FR 13248.) These standards have evolved in the intervening years, and currently contain stringent, specific parameters for: Design (192.101-203); Cathodic protection (192.451-491); Installation (192.301-328); Testing (192.501-517); Operations (192.601-631); and, Maintenance (192.701-755). In the wake of the San Bruno disaster, Congress passed new pipeline safety legislation in mid-December 2011 that will strengthen and expand the existing CFR 49 Titles to include tougher fines for those who violate the standards, along with calling for broader use and application of automated and remotely-controlled valves on pipeline systems in higher population density areas. In addition to the strengthening of the Federal laws and resultant CFR 49 changes, in 2007 the Nevada legislature passed one of the most aggressive One-Call/Third Party Damage laws in the U.S., Nevada 811 (codified in NRS: Chapter 455). As a result of San Bruno, the Public Utilities Commission of Nevada (PUCN) recently renewed its commitment to Nevada 811 along with other safety enhancing measures to ensure that natural gas pipelines in Nevada are among the safest in the nation. (link provided:

<http://opsweb.phmsa.dot.gov/pipelineforum/docs/letters/LaHood%20Ltr%20PSP%204-11-2011.pdf>).

It should be noted that the NEPP differs from PG&E Line 132 in every respect, with the obvious exception that they are both natural gas transmission pipelines. The NEPP has been designed pursuant to the CFR Title 49 Minimum Federal Safety Standards, and the design will be subject to final review, approval, and inspection by the PUCN per the Nevada Administrative Code 704.460. The NEPP will be subject to the PUCN oversight in all matters related to pipeline design, installation, testing, safety, operations, and maintenance. Specific safety measures will include the following measures for the design, construction, and operation that are intended to address any current and future factors that could affect the safe, reliable operation of the pipeline:

- Automated and Remotely-Controlled Valves - Although not required by current law, the NEPP will be equipped with automated/automatic valves to ensure the rapid shut down of the pipeline in the event of an emergency. Willow Creek Meter Station will be equipped with overpressure protection regulators and controllers, as well as automatic electro-pneumatic sub-routines written into the logic of the station's RTU to automatically shut off the flow of gas into the NEPP in the event of an emergency. Coyote Creek MLV will likewise be equipped with automatic valve controls to close the mainline block valve and effectively isolate the upstream and downstream segments of the pipeline in the event of an emergency. Goldstrike Meter Station will be equipped with check valves to eliminate the potential for any back-flow of gas into the NEPP in the event of an emergency, as well as remotely controlled isolation and shutdown capabilities. Designing the NEPP with automated/automatic rapid shutdown valves will help ensure the fail-safe operation and safe shutdown of the pipeline in case of emergency.
- Pipeline Markers – Per 192.707, the NEPP will be properly marked to identify the location of the pipeline such that mining, construction, and ranching interests in the area are on notice of the pipeline's location so that damage by third party excavation can be avoided. The style of such markers, while complying with the code section, will also consider the minimization of any visual impacts to the surrounding environment.
- Nevada 811 Compliance – The NEPP will be registered with Underground Service Alert

North and with the Nevada 811 system to proactively prevent damage from external forces such as may be posed by third party excavation.

- PUCN Oversight for Pipeline Safety – PPC will work closely with the PUCN both prior to construction and afterward to ensure that the NEPP remains compliant with NAC 704.460 guidelines for operations, maintenance, and emergency response. PPC’s Gas Control Center operators will monitor and control the NEPP operation on a real-time basis to ensure compliance with PUCN requirements.

The design of the NEPP utilizes line pipe that is to be rolled at the mill under the American Petroleum Institute (API) 5L Specification for Line Pipe X-52 to X-60 tensile strength requirements, which is on the upper end of the tensile chart for pipe hardness. The pipe would then be coated with Fusion Bonded Epoxy (FBE) for cathodic protection purposes. FBE is among the most durable pipe coatings available, and is resistant to scratching and damage due to handling and construction, or any unplanned contact with rocks and other sharp objects after installation. The ground along the NEPP alignment ranges from coarse rocky soils to exposed bedrock. The excavation methods chosen for the NEPP include the use of commercial trenchers and excavators to accommodate the ground conditions along the route. Given the soil conditions and the standards for construction, the pipe and coating must be protected against damage during and after installation. On the NEPP, this would be accomplished by segregating the rocks from the native soil, “bedding” the excavated trench with fines, laying the pipe in the trench then covering the pipe with more fines. The remaining excavated materials, containing the rocks, would fill the trench to grade. This carefully controlled process prevents damage to the pipe and coating during installation and afterward. Keeping rocks away from the pipe during installation would help prevent any rocks from contacting the pipe during settlement.

The land use along the project ranges from cattle grazing operations to open pit and underground mining. Cattle grazing operations pose little threat of damage to the NEPP due to the fact that, with the exception of the three fenced above ground facilities, the pipeline will be buried below the surface of the ground. The greatest threat of damage would come in the form of unannounced third party excavation for mining or other purposes rupturing the pipeline. PPC would be responsible for maintaining its Public Awareness Program in compliance with Nevada 811 and the CFR 49 Minimum Federal Safety Standards, and would maintain adequate line markers to alert potential excavators to the presence of the buried NEPP. Should PPC be alerted to upcoming excavation through Nevada 811, PPC would follow the appropriate protocols for establishing communications with the excavators well before their work begins, properly spot-marking the pipeline within the immediate vicinity of the excavation and having PPC representatives present at the excavation site if the digging is to occur within or nearby the NEPP permanent ROW corridor.

Industry data supports the common sense conclusion that the risk of damage to natural gas pipelines is higher in areas where population densities are greater and where construction or earth-moving activity is more likely. The likelihood of external damage to the pipeline through excavation activities is minimal due to the relative absence of human presence in all but the southernmost sections of the pipeline and the identification of the pipeline using standard pipeline markers. As with many remote, vegetated areas of the U.S., the danger of wildfires caused by lightning strikes or human initiated must be considered in risk analysis of the NEPP.



With the exception of the three fenced above ground facilities, the threat of damage to the buried NEPP during a wildfire would be negligible. No vegetation would be permitted to become established within the three fenced facilities, which would eliminate the possibility of an area wildfire threatening the pipeline equipment maintained within those facilities. The facilities would also be equipped with lightning dissipaters to minimize the possibility of a lightning-sparked wildfire starting at any of the facilities.

The aforesaid safety measures taken by PPC during construction and afterward throughout the ongoing operation of the NEPP would significantly reduce the possibility of accident or rupture to the pipeline. However unlikely, were unannounced third party excavation to occur within the NEPP ROW corridor that damaged the pipeline resulting in a leak or rupture, the fail-safe design of the NEPP's automated/automatic valves would halt gas flows at the source to contain and minimize the consequences of the leak. Unlike liquid hydrocarbon products such as oil or refined products, environmental damage due to a leaking natural gas pipeline would be restricted to disturbed soil and affected vegetation in the immediate vicinity of the leak. Natural gas is lighter than air, and any gas leaking from the pipeline would quickly dissipate. For ignition and fire to result from a natural gas pipeline leak, the proper ratio of gas to air must be present along with an ignition source. Should all of those factors be present and a pipeline leak or rupture result in a fire, such fire could spread to the surrounding vegetation, spawning a wildfire. In that event, PPC emergency response plans would include shutting off the natural gas and coordinating with first responders and firefighters to protect the safety of persons and minimize the damage to property while containing the leak and extinguishing the fire.

The San Bruno disaster serves as an extreme example of the consequences that are possible when the combination of an aging, improperly installed pipeline and an anomalous high-pressure excursion result in a pipeline rupture and catastrophic fire. Properly designed, installed, inspected, and maintained natural gas pipelines, such as the NEPP, have an expected operating life well in excess of 50 years. As the NEPP ages, the frequency of inspections and maintenance may be increased to ensure that the long-term integrity of the pipeline is sustained. The issues that arise with age generally involve the long-term integrity of the pipe and welds, and corrosion. Unlike PG&E's Line 132, the NEPP would be designed, installed, inspected, and operated per the latest standards for line pipe, welding integrity, inspection, testing, and cathodic protection. These latest Federal standards have been developed as a result of the unfortunate pipeline incidents that have occurred over the years, such that the lessons learned from those failures have been used to educate the industry and substantially upgrade the standards. All welding performed on the NEPP during construction would be radiographically inspected using modern technology, and any welds not passing the inspection would be redone and retested. As applicable, the pipeline may be internally inspected utilizing smart-pigging technology to evaluate the condition of the aging line pipe, welds, and the ongoing effectiveness of the cathodic protection system over the life of the pipeline. Any deficiencies detected during routine maintenance would be promptly addressed.

## **3.4 Analysis of Resources**

### **3.4.1 Cultural Resources**

#### **Affected Environment:**

The study area for cultural resources extends 300 feet of either side of the Proposed Action and Alternative alignment (Figure 3-4).

### **Regulatory Framework:**

Federal historic preservation laws provide a legal environment for documentation, evaluation, and protection of cultural resources that may be affected by federal undertakings, or by private undertakings operating under federal license, or on federally managed lands. NEPA states that federal undertakings shall take into consideration impacts to the natural environment with respect to an array of resources, and that alternatives must be considered if an unresolved resource conflict exists and there is a reasonable alternative that addresses that conflict. The courts have made clear that cultural resources are regarded as part of the natural environment. The National Historic Preservation Act of 1966 (NHPA), as amended, established the Advisory Council on Historic Preservation (ACHP) and the National Register of Historic Places (NRHP). The NHPA mandates that federal agencies consider an undertaking's effects on cultural resources that are listed on or eligible for listing on the NRHP, and Section 106 of the NHPA establishes a review process by which these resources are given consideration during the conduct of federal undertakings. Cultural resources that are listed on or eligible for listing on the NRHP are referred to as historic properties.

The NHPA requires that federal agencies take into account the effect of a proposed undertaking on historic properties. Historic property, as defined by the regulations implementing Section 106, means "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the NRHP maintained by the NPS." Potential effects to historic properties are assessed using the "criteria of adverse effect" (36 CFR 800.5[a][1]), as defined in the implementing regulations for the NHPA. "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association." The analysis of effects using these criteria would be limited to those resources that are listed in the NRHP or have been recommended as eligible.

Regulations in 36 CFR 800 outline the process through which historic preservation legislation under the NHPA is administered; 36 CFR 800.14 allows federal agencies to adopt program alternatives to 36 CFR 800 and to tailor the Section 106 process to better fit agency procedures. The most common program alternative would be a Programmatic Agreement (PA). A PA would define general and specific measures to be undertaken by the BLM, SHPO, and PPC to ensure that the BLM's objectives and responsibilities regarding the protection of historic properties under the NHPA are fulfilled. Specifically, the PA would outline the steps to be taken to: 1) identify prehistoric and historic sites; 2) evaluate them for eligibility for listing on the NRHP; 3) identify potential adverse effects; 4) develop measures to avoid, reduce, or mitigate adverse effects; and 5) address inadvertent discoveries. Additionally, the PA assigns roles and responsibilities for implementation of the PA, ensuring all interested parties are given an opportunity to comment on the effects of an undertaking to historic properties and mitigation. .

The BLM and the Nevada SHPO are currently preparing a programmatic agreement (PA) entitled Programmatic Agreement among the Bureau of Land Management, the Nevada State

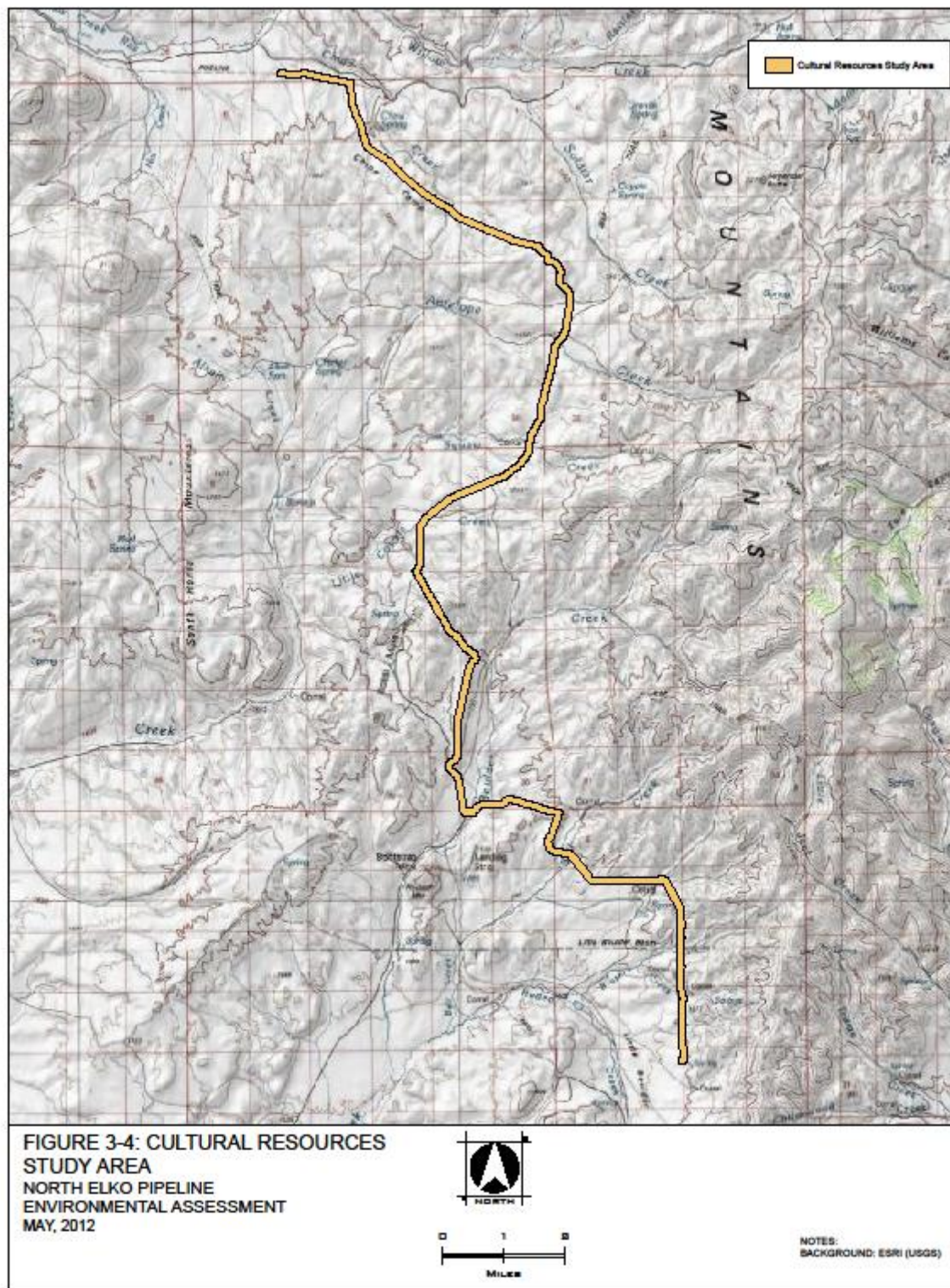


Figure 3-4. Cultural Resources

Historic Preservation Officer, and Prospector Pipeline Company Regarding the North Elko Pipeline Project. A copy of the draft PA is available for public inspection at the Elko BLM office.

The PA establishes an area of potential effect (APE) that includes all potential direct effects and indirect effects to cultural resources from all development-related activities associated with the proposed action. In the PA, the BLM, SHPO, and PPC agree that construction of the NEPP would be administered in accordance with specific stipulations intended to ensure that, to the extent practicable, historic properties are treated to avoid or mitigate effects regardless of surface ownership, thus satisfying BLM Section 106 responsibilities for all aspects of the undertaking.

The PA stipulates that prior to authorization, or as a condition of approval, BLM shall ensure that PPC funds and completes all appropriate cultural resource Class I and Class III inventories, including, as deemed necessary, ethnographic studies and visual impact assessments within the APE. The Class III inventory of all proposed project facilities shall be completed prior to construction. The required inventory/identification activities shall be completed regardless of the land ownership.

The BLM, in consultation with the SHPO, shall evaluate all cultural resources located within the APE for eligibility to the National Register of Historic Places (NRHP). Eligibility would be determined prior to the initiation of activities that may affect cultural resources. The BLM would consult with appropriate Tribes to evaluate the eligibility of properties of traditional religious and cultural importance.

To the extent practicable, BLM shall ensure that PPC avoids adverse effects to historic properties through project design, or redesign, relocation of facilities, or by other means.

When avoidance is not feasible and data recovery is proposed to lessen or mitigate project-related adverse effects to historic properties, the BLM, in consultation with the SHPO, would ensure that PPC develops a Data Recovery/Treatment Plan (DRTP) that is consistent with the Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation (48 FR 44716-37), *Treatment of Historic Properties: A Handbook* (Advisory Council on Historic Preservation 1980) and ACHP's Recommended Approach for Consultation on the Recovery of Significant Information from Archaeological Sites dated June 17, 1999. The BLM shall ensure as a condition of approval and/or notice to proceed that PPC implements and completes fieldwork portions of approved DRTP prior to initiating any activities that may affect historic properties.

**Eligibility Criteria for Listing Properties on the NRHP:**

The NRHP, maintained by the National Park Service (NPS) on behalf of the Secretary of the Interior, is the nation's inventory of historic properties. The NPS has established three main standards that a resource must meet to qualify for listing on the NRHP: age, integrity, and significance. To meet the age criteria, a resource generally must be at least 50 years old. To meet the integrity criteria, a resource must "possess integrity of location, design, setting, materials, workmanship, feeling, and association" (36 CFR 60.4). Finally, a resource must be significant according to one or more of the following criteria:

- Criterion A – Be associated with events that have made a significant contribution to the broad patterns of U.S. history; or
- Criterion B – Be associated with the lives of persons significant in U.S. history; or
- Criterion C – Embody the distinctive characteristics of a type, period, or method of construction, or represent the work of a master, or possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or
- Criterion D – Have yielded, or may likely yield, information important in prehistory or history.

**Investigations in the Study Area:**

A Class III inventory would be performed and reported in accordance with the existing BLM-SHPO protocol agreement (PA), and any National Register eligible sites that cannot be avoided would be treated in accordance with plans reviewed and approved by the BLM and SHPO.

**Environmental Consequences:**

**Proposed Action:**

No known cultural resources are expected to be impacted as a result of the Proposed Action. Should any eligible properties be found during surveys, the pipeline route will be rerouted, if feasible, to avoid the property; otherwise, treatment in accordance with the PA will be required.

**No Action Alternative:**

Under the No Action Alternative, the NEPP would not be constructed. No ground-disturbing activities related to the Proposed Action would occur. Therefore, no impacts predicted with the Proposed Action Alternative would occur under the No Action Alternative.

**Cumulative Effects:**

The CESA for cultural resources is the Carlin Trend. Multiple mining operations have impacted historic properties and have unintentionally (when operators make mistakes or are simply unaware of the presence of cultural resources) impacted historic properties. To minimize additional impacts to cultural resources, the NEPP would be constructed for compliance with existing federal and state law and regulations, and subject to monitoring surveys by BLM archeologists to insure protocols, as outlined in the POD, are followed. The PA will outline appropriate protocol for pre, during, and post construction requirements, as well as identifying actions necessary should impacts occur.

### **3.4.2 Native American Religious Concerns**

Federal law and agency guidance require BLM to consult with Native American tribes with concerns for their cultural values, religious beliefs, and traditional practices that could be affected by actions on BLM-administered lands. This consultation includes the identification of places (i.e., physical locations) of traditional cultural importance to Native American tribes. Places that may be of traditional cultural importance to Native American people include, but are not limited to:

- Locations associated with the traditional beliefs concerning tribal origins, cultural history, or the nature of the world;
- Locations where religious practitioners go, either in the past or the present, to perform

- ceremonial activities based on traditional cultural rules or practice;
- Ancestral habitation sites;
- Trails, burial sites; and
- Places from which plants, animals, minerals, and waters possessing healing powers or used for other subsistence purposes, may be taken.

Locations such as those stated above may exist within the project boundary. In 1992, the National Historic Preservation Act (NHPA) was amended to explicitly allow that “properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization may be determined to be eligible for inclusion on the National Register of Historic Places (NRHP).” If a resource has been identified as having importance in traditional cultural practices and the continuing cultural identity of a community, it may be considered a traditional cultural property (TCP). The term “traditional cultural property” is used within the federal legal framework for historic preservation and cultural resource management in an attempt to categorize historic properties containing traditional cultural significance. To qualify for nomination to the NRHP, a TCP must:

- Be more than 50 years old;
- Be a place with definable boundaries;
- Retain integrity; and
- Meet certain eligibility criteria as outlined for cultural resources in the NHPA (see Section 3.9, Cultural Resources).

Other federal laws, regulations, directives, or policies include, but are not limited to, the Native American Grave Protection and Repatriation Act (NAGPRA) of 1990, American Indian Religious Freedom Act (AIRFA) of 1978, Archaeological Resources Protection Act (ARPA) of 1979, and Executive Order (EO) 13007 of 1996.

### **Affected Environment:**

The effects of federal undertakings on TCPs or places of religious or cultural importance to contemporary Native Americans are given consideration under the provisions of EO 13007, AIRFA, NAGPRA, and recent amendments to the NHPA. As amended, the NHPA now integrates Indian tribes into the Section 106 compliance process, and also strives to make the NHPA and NEPA processes procedurally compatible. Furthermore, under NAGPRA, culturally affiliated Indian tribes and federal agencies jointly may develop procedures to be taken when Native American human remains are discovered on federal lands.

In compliance with the NHPA, as amended, the BLM initiated standard protocol to engage any interested Native American in consultation for the NEPP on February 16, 2012. Among the different venues used to solicit engagement were letters sent to the federally recognized tribes/bands listed under Section 5.1., to inform the various tribes of the proposed undertaking and to inquire whether the tribes:

- wished to arrange a meeting;
- required more information about the project;
- wanted to enter into formal consultation; or
- wanted to attend a field tour of the proposed project area.



Other attempts to reach interested parties, for the purpose of strengthening community and tribal relationships include: being available to attend tribal council meetings (as permitted), publishing a quarterly information newsletter for current and upcoming projects (distributed via mail and email), discussing current and upcoming projects monthly via local radio stations, local newspapers, and at meetings conducted by other organizations where public are invited, such as the Elko County Commissioner Meetings, RAC and NRMAC.

### **Environmental Consequences:**

#### **Proposed Action:**

To date, no tribes have responded to the BLM letters, and no TCPs or places of cultural or religious importance have been identified through inventory or by the contacted tribes for this project. If a TCP or place of cultural or religious importance is identified to BLM by tribal representatives, no surface disturbance would occur within or immediately adjacent to the boundary of the property prior to completion of all consultation required by law. If data recovery or other form of mitigation is required at a TCP or place of cultural or religious importance, a data recovery or mitigation plan would be reviewed and approved by the BLM and SHPO. Tribal representatives would be asked to participate in the development of any such data recovery or mitigation plan. Therefore, even if a TCP is identified in the area of the NEPP route, no adverse effects to Native American Religious Concerns are anticipated as a result of the Proposed Action.

#### **No Action Alternative:**

Under the No Action Alternative, the NEPP would not be constructed. No impacts to Native American Religious Concerns would occur.

### **Cumulative Effects:**

A Cumulative Impacts Study Area (CESA) can only be identified if and when potential direct or indirect impacts to a resource have been identified. Since no potential impacts to Native American religious concerns have been identified, there is no CESA at this time. However, the issue remains open per the requirements of the applicable laws. Should the BLM or any tribal representative identify a protected value under the laws listed above, the BLM will take appropriate action at that time to analyze the value, whether it be a TCP, a gravesite, or any other protected property, and to protect the property in accordance with existing law, Executive Orders, and policy. If appropriate, a CESA will be determined and an appropriate analysis completed at that time.

### **3.4.3 Noxious Weeds**

#### **Affected Environment:**

Noxious weeds are defined under Nevada law (NRS 555.005) and the federal Noxious Weed Act of 1974, amended by Section 15 of the U.S. Farm Bill, Management of Undesirable Plants on Federal Lands, as any species of plant that is or is likely to be detrimental or destructive and difficult to control or eradicate. Noxious weeds are damaging to the environment and local economy, and replace desirable vegetation. Often noxious weeds proliferate where native vegetation has been removed or disturbed.

SRK surveyed portions of the study area in 2011 and documented the occurrence of Scotch



thistle (*Onopordum acanthium*), medusahead (*Taeniatherum caput-medusae*), and hoary cress (*Cardaria draba*) (SRK 2011). In addition, the BLM provided a shapefile of known occurrences of noxious weeds near the project area. (Figure 3-5). Surveys of the yet-to-be surveyed portions of the study area would be completed in 2012 prior to construction.

### **Environmental Consequences:**

#### **Proposed Action:**

Disturbed sites and recently seeded areas are highly susceptible to invasion by undesirable species such as noxious weeds. Indirect effects of the Proposed Action would include potential introduction of weedy species from reclaimed areas to adjacent stands of native vegetation.

The NEPP weed management program is described in Section 2.1.4 – Invasive, Nonnative Species and in the NEPP Noxious Weed Management Plan (Appendix C). Project area surveys for existing weed infestations and subsequent weed control activities would begin prior to initiation of any ground disturbing activities authorized by the BLM and would continue until reclamation is complete and the potential for weed invasion is minimized. Noxious weed control methods associated with the Proposed Action would control the invasion of weeds and reduce the potential for the project area to be a source of noxious weed seed for adjacent, uninfested areas. The goal of successful reclamation (Appendix A) would be to establish a vegetation community that would be no more susceptible to weed invasion than under existing conditions.

#### **No Action Alternative:**

Under the No Action Alternative there would be no ground disturbance and potential spread or new infestation of noxious weeds associated with the construction of the NEPP. There would be no treatment of existing infestations of noxious weeds and no site specific introduction of ecologically based seed mixes as a means of competition for noxious weed species by PPC. However, the BLM would continue its ongoing noxious weed abatement program.

#### **Cumulative Effects:**

The CESA for noxious weeds is the allotment boundaries for the Tuscarora, Twenty-five and T Lazy S allotments (Figure 3-5). The spread of noxious weeds is an ongoing concern within the CESA. Each of the mining projects has noxious weed control programs that involve regular monitoring and treatment. The BLM has an ongoing program to treat noxious weeds and its restoration and rehabilitation programs for wildfire damaged give a great deal of attention to this issue. The Proposed Action Alternative is expected to result in a small improvement to the overall problem of noxious weed infestation. There would be no substantive impact from a cumulative effects perspective.

### **3.4.4 Land Use and Access (including mining claims)**

#### **Affected Environment:**

The land within the project area is primarily public land managed by the Bureau of Land

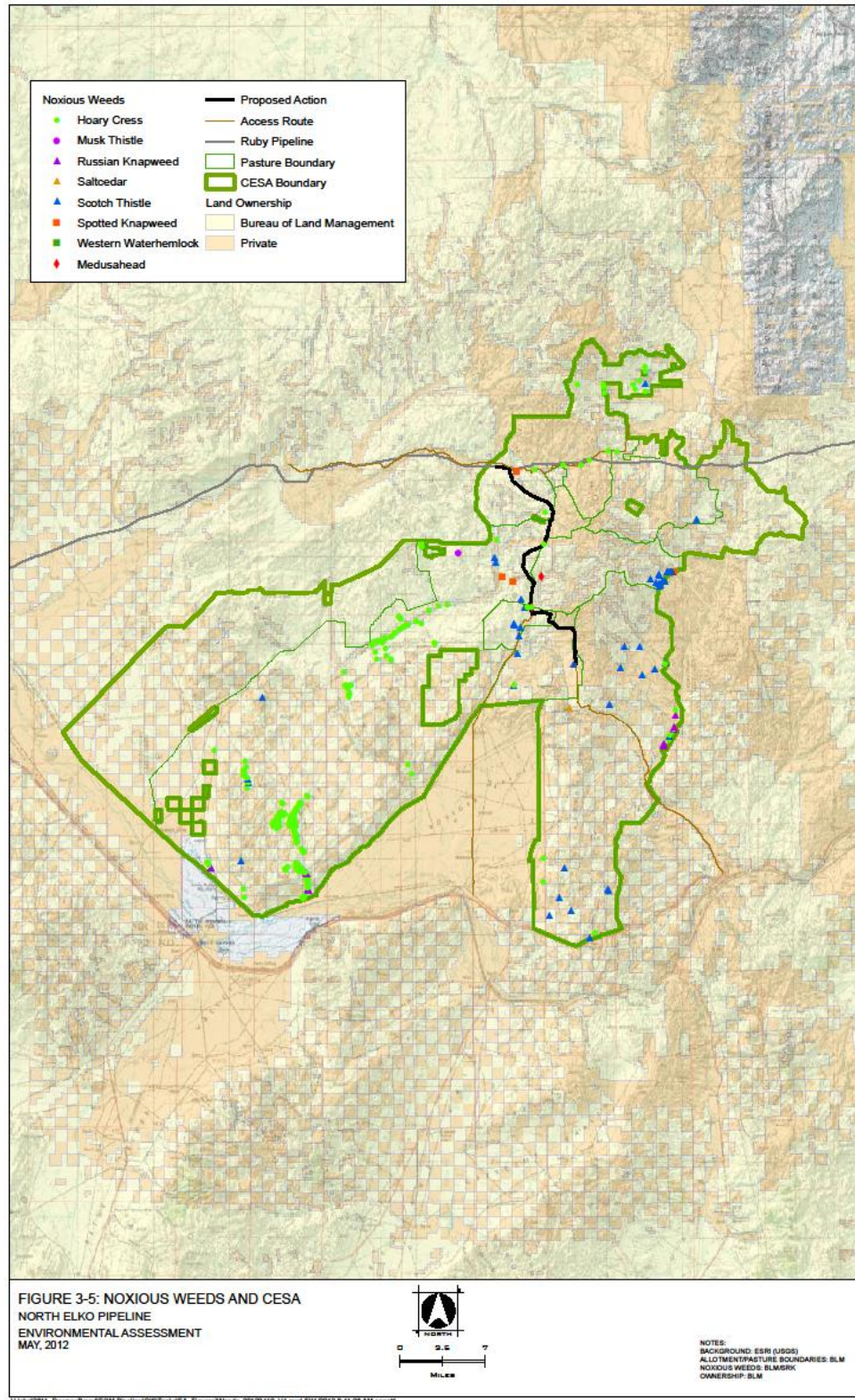


Figure 3-5. Noxious Weeds and CESA

Management. The remaining land is privately owned. Federal law allows use of public lands concurrently by multiple users. NEPP's proposed Willow Creek Meter Station and many access roads are located on public land. All proposed staging areas, the Coyote Creek Valve Station and requested PPC (and PPC has agreed) to cross at locations that are at least 40 feet from any existing above ground facilities. The primary existing land uses in the NEPP study area are grazing, dispersed recreation, and mining (exploration and mineral beneficiation). Livestock use the entire project area during seasonal grazing except for areas closed to grazing because of mining (Goldstrike) and areas temporarily closed for restoration due to wildfire damage.

### **Environmental Consequences:**

#### **Proposed Action:**

Construction of the pipeline could temporarily inhibit public access as construction activities impact existing roads and trails. Such impacts are expected to last for less than one day. After completion, the pipeline could become used for off-highway vehicle (OHV) traffic including ATVs. Such travel would lead to degradation of revegetation efforts and additional impacts to sage-grouse. Placing rock barricades and leaving a rough surface on the reclaimed pipeline route would help to deter OHV use.

The presence of warning signs along the pipeline route could detract from the feeling of isolation that some recreationists enjoy. In addition, granting a right-of-way for a natural gas pipeline could affect other future uses of the land, such as mining. However, there are no known prospective uses that the pipeline would impact.

PPC has contacted recorded mining claimants with mining claims in or close to the project area. None have indicated a concern about construction in the Proposed Action.

#### **No Action Alternative:**

Because the NEPP project would not be constructed, there would be no impacts to land management and uses.

### **Cumulative Effects:**

From a historic perspective in projects unrelated to the NEPP concerns surfaced that access roads and trails might develop post construction by subsequent OHV use on temporary routes used during NEPP construction. Such roads and trails increasingly fragment the landscape and raise concerns about impacts to resources such as wildlife (i.e. potentially affecting migration patterns), or soils and vegetation (via compaction, erosion and displacement) etc.). This concern would be minimized by following BLM S&G's and protection measures included in the POD which would include, but would not be limited to: signage prohibiting OHV related use on closed pipeline trails, and the installation of rock barriers, roughened surfaces, and ensuring fences are rebuilt; all of which would be placed or implemented where directed by BLM during the reclamation phase of the project.

## **3.4.5 Wildlife**

### **Affected Environment:**

Wildlife habitat quality in the vicinity of the NEPP project area has been affected by wildfire, mining related activities and facilities, and construction of the Ruby Pipeline (Figures 3-2.1 – 3-

2.14, above). Within the study area, approximately 998 acres of sagebrush/grassland habitat are currently intact. Wildlife species and habitats found within the vicinity of the project area are typical of the Great Basin region and are described below.

### **Large Mammals:**

#### **Mule Deer (*Odocoileus hemionus*):**

The project area is characterized primarily by the big sagebrush-bitterbrush, low sagebrush and Wyoming big sagebrush vegetation types. The area provides some transitional habitat for mule deer during spring and fall migration. Mule deer prefer cover provided by tall shrubs and trees in the spring, summer, and fall. The NEPP would cross mule deer habitat, including portions of migration corridors as shown on Figure 3-6.1. The migration corridor that crosses over the northern portion of the NEPP in the valley and upland sections is a seasonal migration corridor between the Tuscarora Range and the Sheep Creek Range. Between 500 and 1,000 animals use the corridor each season. The migration corridor in the southern portion of the NEPP is seasonal between the Tuscarora and Independence Range to Dunphy Hills. Movement on this corridor has been sharply reduced by mining activities. Mule deer sign was observed within all surveyed sections of the NEPP alignment (SRK 2011).

This deer herd is capable of increasing rapidly due to the excellent summer habitat and high fawn producing capabilities associated with the area. For example, the herd increased by 12 percent in 2009-2010 and 8 percent in 2010-2011. At present, NDOW believes the Area 06 deer herd is still slightly below the carrying capacity of available winter range (NDOW 2012b). Also, NDOW believes winter range condition will continue to be the limiting factor for long-term population levels as has been the case for most of the past decade (NDOW 2012b).

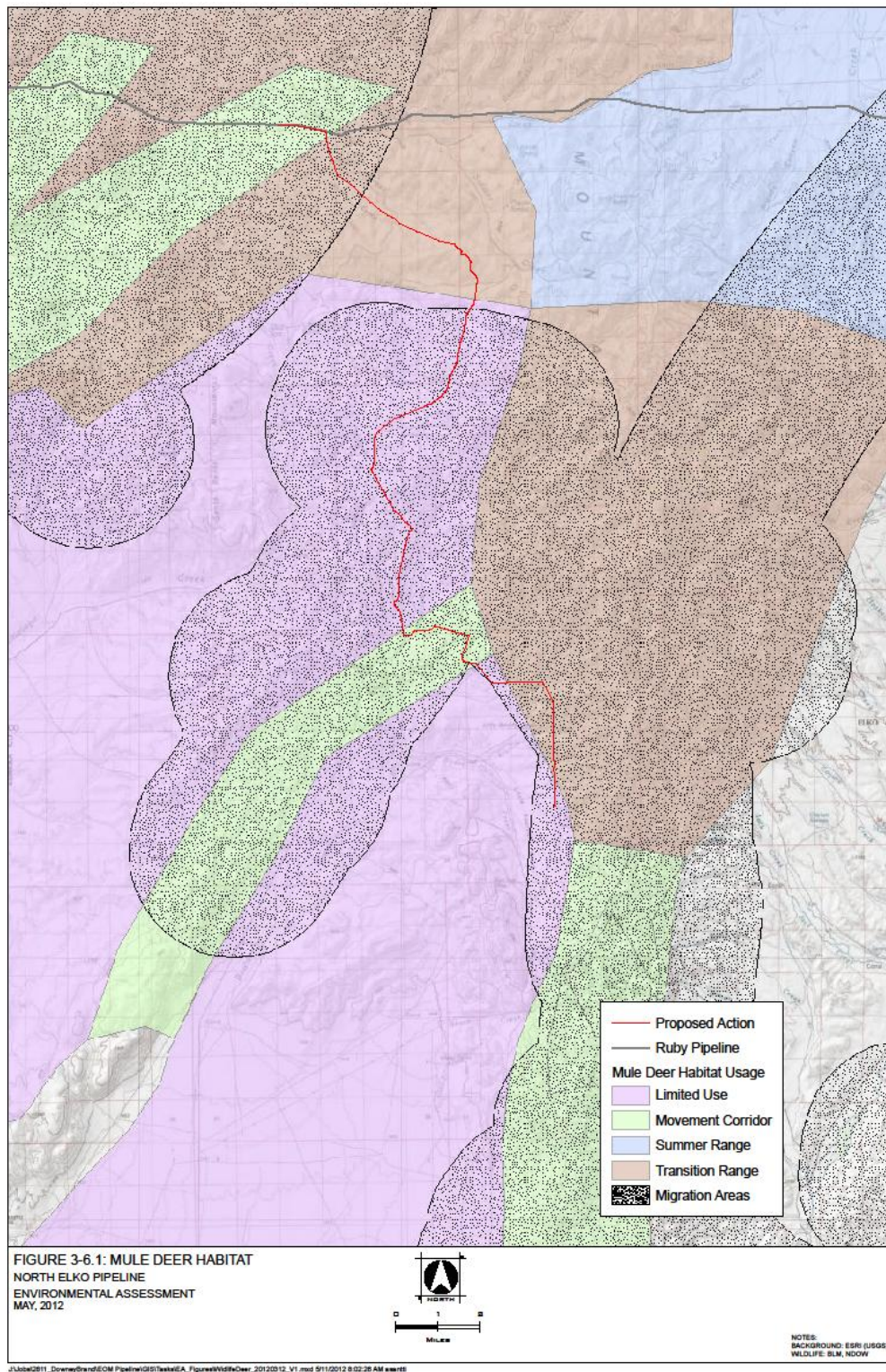
#### **Pronghorn antelope (*Antilocapra americana*):**

Pronghorns are the primary big game mammal occupying Management Area 06 near the project area (Figure 3-6.2). Pronghorn antelope prefer gently rolling to flat terrain with an open topography. Areas with low understory allow the antelope to see far and move quickly away from threats. The burned areas provide a wide open expanse that is suitable for the pronghorn. Pronghorn antelope sign was observed throughout the areas surveyed in 2011 (SRK 2011). Use of the study area by pronghorn antelope is highly dependent on water and forage availability. The study area contains both low density and crucial winter range for pronghorn. The pronghorn population is within the carrying capacity in Game Management Unit 068, a sub area of Management Area 06 (NDOW 2012b).

#### **Elk (*Cervus canadensis*):**

Elk are distributed from British Columbia through the western United States south to central Arizona and New Mexico. Due to this wide distribution, elk live in a variety of ecosystems ranging from conifer forests to desert grasslands. Elk prefer to browse on grasses and forbs during the growing season and woody vegetation during the winter. The higher topographic area to the east of the NEPP project area is elk summer range while an area near the southern extent of the NEPP project area is crucial winter range (Figure 3-6.2). The majority of the NEPP would be located in low-density elk habitat. Elk sign were observed throughout the areas surveyed in 2011. One individual was observed in the vicinity of the survey area (SRK 2011). Elk in Hunt Units 062, 064, 066 - 068 are at an estimated population of 550 individuals, which is a slight





**Figure 3-6.1 Mule Deer Habitat**



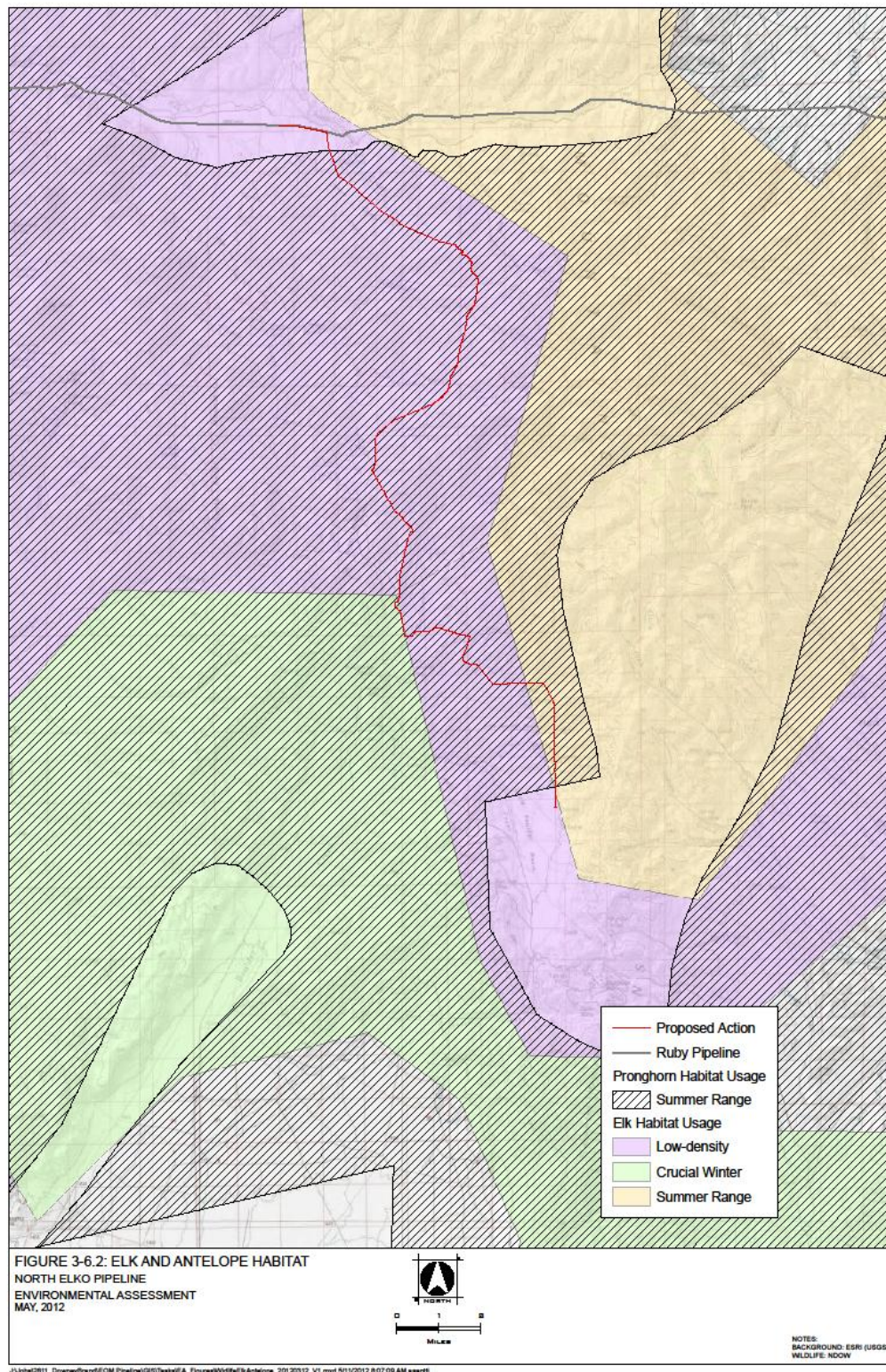


Figure 3-6.2 Elk and Antelope Habitat

increase over the 2010 estimate (NDOW 2012b).

Mountain Lions (*Puma concolor*):

Mountain lions are classified as a big game species in Nevada. Mountain lions are fairly common in north-central Nevada and occupy the higher elevations surrounding the study area (NDOW 2012b). Mountain lion habitat remains in good condition throughout the Eastern Region of Nevada with ample prey base and minimal loss of habitat (NDOW 2012b).

Small Mammals:

Black-tailed jackrabbits (*Lepus californicus*) are common in sagebrush habitats from the valley floor to the upper foothills, including pinyon-juniper woodlands that have a shrub component. Blacktailed jackrabbits are abundant throughout the study area based on the observations of sign during the field survey (SRK 2011). The mountain cottontail (*Sylvilagus nutallii*) is common throughout foothills and in mixed vegetative communities with a substantial shrub component. Mountain cottontails are present within the study area based on observations of sign during the field survey (SRK 2011). The Townsend ground squirrel (*Citellus townsendii*) is found near desert shrub altitudes up to approximately 6,900 feet amsl. Commonly they feed and live around sagebrush, sagebrush steppe, wheatgrass-needlegrass shrub steppe, bitterbrush, and the edges of some riparian areas. Townsend ground squirrels are present but not abundant within the study area based on observations during the field survey (SRK 2011).

Other small mammal species observed within the study area included the least chipmunk (*Eutamias minimus*), and mice (*Mus* spp.). Several species likely to occur, but not observed include badger (*Taxidea taxus*), desert cottontail (*Sylvilagus auduboni*), kit fox (*Vulpes macrotis*), skunk (*Mephitis mephitis*), and porcupine (*Erethizon dorsatum*) (SRK 2011).

Birds:

A variety of bird species typical of sagebrush and grassland communities are anticipated to exist in the study area. A large number of migratory birds breed and raise young in Nevada. These birds are typically present within areas of the Great Basin from spring through fall. The species or their sign observed within the study area include American robin (*Turdus migratorius*), horned lark (*Eremophila alpestris*), chipping sparrow (*Spizella passerine*), Brewer's sparrow (*Spizella breweri*), mourning dove (*Zenaida macroura*), western meadowlark (*Sturnella neglecta*), sage thrasher (*Oreoscoptes montanus*), and the common raven (*Corvus corax*).

Upland game birds found in or near the study area included sage-grouse (*Centrocercus urophasianus*) and chukar (*Alectoris chukar*). Sage-grouse are discussed further in the Special Status Species Section 3.2.8. Chukars are typically associated with perennial water sources, mesic areas, and rugged slopes or rock outcrops. They are resident breeders in dry, open, and often hilly country that nest in scantily lined ground scrapes laying eight to 20 eggs. Chukar feed on insects and a wide variety of seeds, including cheatgrass. Rocky habitats in the vicinity of the study area are the primary habitat for this species, however no chukars' or chukar signs were observed during the during the field survey (SRK 2011).

Birds of prey observed in the study area included the red-tailed hawk (*Buteo jamaicensis*). The red-tailed hawk is associated with a variety of habitats including sagebrush, grassland, riparian, or pinion-juniper habitats. One active red-tailed hawk nest was observed on a power pole and an



unidentified, abandoned raptor nest was observed on another power pole near the study area

### **Migratory Birds:**

Migratory bird species are protected under the Migratory Bird Treaty Act (MBTA) (16 USC 703-711) and Executive Order (EO) 13186 (66 Federal Register [FR] 3853). Pursuant to EO 13186, a draft MOU among the BLM, USFS, and USFWS was drafted in order to promote conservation and protection of migrating birds. Specific measures to protect migratory bird species and their habitats have not been identified within EO 13186, but instead, the EO provides guidance to agencies to promote BMPs for conservation of migratory birds. As a result, the BLM Nevada State Office prepared Migratory Bird BMPs for the Sagebrush Biome to assist BLM field offices in the consideration of migratory birds in land management activities presented below (BLM, 2003).

“Before any new disturbance activities commence, avian surveys would be conducted during the breeding season for migratory bird species (April 1 – July 31) if any disturbance activities are proposed during this time frame. A 14-day window for disturbance would be imposed if surveys occur between April 1 and May 15. Disturbance must commence within 14 days of the completion of each survey to be within compliance. If disturbance does not occur within 14 days, a new survey would be required. If the initial survey takes place after May 15, a single survey would suffice and the 14 day restriction would not be imposed. Disturbance can commence at any time after the survey completion and no active nests are documented. Surveys would be conducted by a qualified biologist and the survey results and the discovery of any nesting sites would be reported to BLM and the NDOW and a suitable buffer would be determined depending on species. Site reporting may be done at initial encounter by the surveying biologist and resolved before submission of the report (BLM no date)”.

### **Other wildlife:**

In addition to the species already discussed, reptiles, such as Great Basin rattlesnakes (*Crotalus oreganuslutosus*), northern desert horned lizards (*Phrynosoma platyrhinos*), and long-nose leopard lizards (*Gambelia wislizenii*), are likely throughout the NEPP study area. Several lizards were observed during the survey, but none were positively identified (SRK 2011).

### **Environmental Consequences**

The primary issues that can cause impacts to wildlife include disruption of big game movements, loss or alteration of native habitats, habitat fragmentation, animal displacement, and direct loss of animals. Potential direct and indirect impacts of the Proposed Action on terrestrial wildlife can be classified as short-term and long-term. Short-term direct impacts arise from habitat disturbance due to construction, which would cease upon completion of construction, reclamation and seeding.

Long-term direct impacts may consist of permanent changes to habitats and the wildlife populations that depend on those habitats, irrespective of reclamation success. Direct impacts to wildlife populations could include limited direct mortalities from construction activities, habitat loss or alteration, incremental habitat fragmentation, and animal displacement.

The most common short term wildlife responses to noise and human presence are avoidance or accommodation. Avoidance may result in displacement of animals from an area larger than the actual disturbance area. The total extent of habitat loss as a result of the wildlife avoidance response varies from species to species and can even vary between individuals of the same species. Also, after initial avoidance of human activity and temporary noise-producing areas, certain wildlife species may acclimate to the activity and begin to reoccupy areas formerly avoided even as the disrupting activities continue.

**Proposed Action:**

Under the Proposed Action approximately 129 acres of intact upland and 4 acres of riparian habitat, which could potentially serve as mule deer or pronghorn antelope habitat, would be disturbed. Proposed disturbance would result in a temporary loss of potential forage and habitat fragmentation until the re-establishment of vegetation through reclamation and seeding. Temporary habitat fragmentation could occur primarily from the direct disturbance or alteration of wildlife habitat and indirectly due to noise and human presence associated with temporary construction activities. The severity of these effects on terrestrial wildlife depends on factors such as sensitivity of the species, seasonal use, type and timing of project activities, and physical parameters (i.e. topography, cover, forage, and climate). During fall migration the available fall forage and browse species would be important for sustaining nutritional value throughout the winter. Available forage in spring (i.e. forbs and grasses) is also important. With respect to migratory birds, construction between August 1 and November 15 would temporarily eliminate a small fraction of the area's forage, hiding cover, and breeding sites for species present.

Since construction of the NEPP is not expected to begin until after July 31<sup>st</sup>, none of the Limited Operating Period restrictions would apply. Beyond a temporary disturbance to vegetation, construction and operation of the NEPP is not expected to result in any substantive or permanent adverse effects on wildlife populations. Reclamation and seeding within the same construction season, followed by winter precipitation, is expected to promote and reestablish desired plant communities appropriate for wildlife habitat on all disturbed lands, except for the small acreage of permanent disturbance (0.24 acres). The proposed reclamation is detailed in the Reclamation Plan (Appendix A). The POD will address construction activities (and appropriate Limited Operating Period Restrictions) that could occur should the optimal construction period of August 1 and November 15 not be feasible.

The Proposed Action would result in long-term impacts to approximately 0.23 acre of partially restored sagebrush/grassland habitat on public land and approximately 0.24 acre of continued disturbance on private lands for above-ground facilities. The 0.23 acre of public land was disturbed in 2009 and then reclaimed following construction of the Ruby Pipeline where the proposed Willow Creek Meter Station would be located. The 0.24 acre includes approximately 0.01 acre (450 square feet) of disturbed land on private property where the Coyote Creek MLV Station would be located, and approximately 0.23 acre of existing disturbance for the Goldstrike Meter Station within the operations boundary for the Goldstrike Mine.

Wildlife may be temporarily displaced from habitat due to increased activity, noise, dust related to construction and time for establishment of seeded vegetation. After vegetation recovers, wildlife would be expected to re-inhabit the Project Area. As reclamation vegetation matures and

begins to resemble the original vegetation in composition and density, wildlife use of the area would most likely resemble pre-project construction levels.

**No Action Alternative:**

Under the No Action Alternative, the NEPP would not be constructed and there would be no new disturbance to wildlife species or their habitat. Existing areas in disturbed land surface types, including wildfire damaged lands, approximately 96 acres on public and private lands, would not be reclaimed and seeded by the proposed NEPP at the replacement ratios stated in Section 2.1.5, Impact Compensation Measures – Greater Sage-Grouse.

**Cumulative Effects:**

The Cumulative Effects Study Area (CESA) for wildlife and wildlife habitat is the Nevada Department of Wildlife (NDOW) Management Unit 06 (Area 06) presented in Figure 3-6.3. The CESA includes a contiguous area that provides important seasonal habitat for mule deer (NDOW 2012b). Generally, the CESA extends from the northern end of the Independence Range in the north to the Humboldt River and northern end of the Piñon Range in the south. Negative impacts to mule deer in the CESA have resulted primarily from wildfires, mineral exploration, mining activities, non-native invasive weeds, and livestock grazing (BLM 2007). Development of the three present mine projects (described above) as well as other mining operations on the Carlin Trend will continue to impact mule deer in the CESA primarily through reduction in habitat and constriction to migration corridors (BLM 2007). Positive impacts include restoration efforts to wildfire damaged lands, grazing improvements (i.e. the Willow Creek Habitat Enhancement Plan), reclamation of waste rock facilities at existing mines, and funding for a variety of wildlife enhancement projects including water developments for wildlife (“guzzlers”), riparian/meadow and wetlands improvements, sage-grouse habitat improvements, fence modifications to facilitate wildlife movements, and off-site big game intermediate and winter range rehabilitation projects to mitigate the effects of mining projects.

Cumulative impacts to wildlife are directly related to habitat loss, habitat fragmentation, and animal displacement. Encroaching human activities along the foothills of the Tuscarora Range and the Carlin Trend have resulted in animal displacement and habitat fragmentation in areas that are utilized as mule deer migration corridors between summer and winter ranges. The population of migrating mule deer has declined due to impacts initiated by wildfire and anthropogenic development on important seasonal ranges (NDOW 2012b). Displacement of mule deer and other big game animals by wildfire, mining activities, and other land uses subsequently increases demands on adjacent habitats. At present, it is believed the Area 6 deer herd is still slightly below the carrying capacity of available winter range. However, winter range conditions dictate long-term population levels as has been the case for most of the past decade (NDOW 2012b). Displaced animals would be lost from the population until habitats are rehabilitated allowing populations to expand into affected areas. Many of the local wildlife populations (e.g., big game, raptors, and migratory birds) that occur in the CESAs would continue to occupy their respective ranges and breed successfully, although population numbers may decrease relative to the amount of cumulative habitat loss and disturbance from incremental development.

Within the mule deer CESA (Figure 3-6.3), mining has removed wildlife habitat, primarily as a function of fencing and/or land disturbance associated with mining operations. Wildfire has a major negative impact on these species. From 1999 through 2011 thousands of acres of wildlife

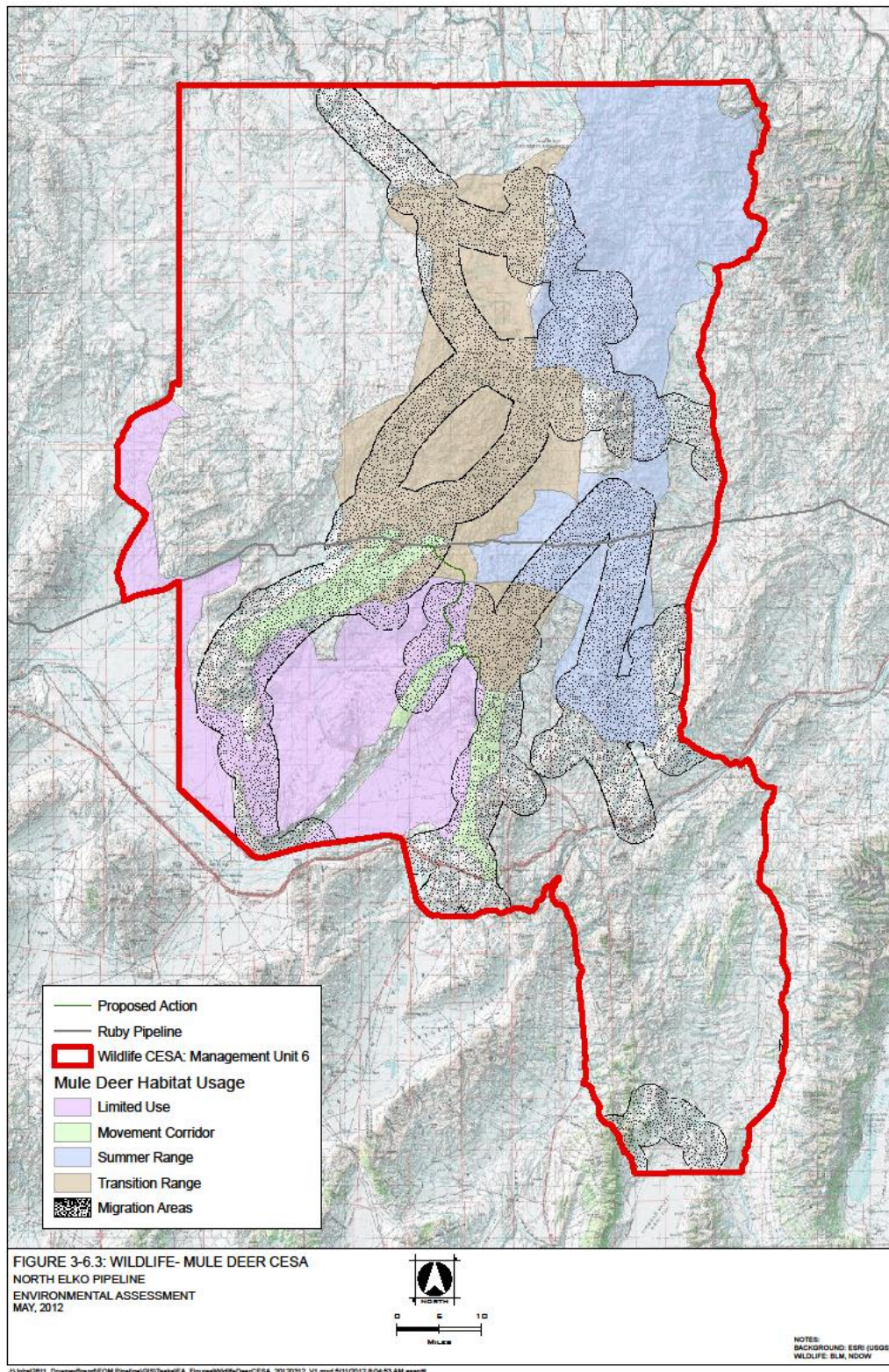


Figure 3-6.3. Wildlife – Mule Deer CESA



habitat have been impacted by large-scale wildfires (BLM 2012a). Wildfire has resulted in the temporary to long-term loss of shrubs that provide forage and cover as habitat components, which has caused reductions in mule deer herds throughout the CESA. Effects of wildfires to terrestrial wildlife species include loss of habitat (forage and cover) which can lead to die-offs.

The loss of canopy cover and forb and grass diversity is prevalent across the burned areas and the recovery of these plant communities will vary in terms of time and cover. It is common for native shrub communities affected by wildfire to be replaced by cheatgrass-dominated grasslands until seeded species and/or native vegetation becomes re-established, particularly, at elevations below 6,000 feet.

Ongoing dewatering operations at mines along the Carlin Trend as well as small-scale dewatering at the proposed Hollister Underground Mining Project could cause a reduction or loss of flow in springs and seeps that support wildlife. Wildlife uses these resources as part of a larger habitat complex. The potential dewatering impacts are addressed in multiple Environmental Analyses completed for mining projects on the Carlin Trend (BLM 2007, BLM 2008b, BLM 2010).

Many of the local wildlife populations (e.g., small game, migratory birds) that occur in the cumulative effects study area would continue to occupy their respective ranges and breed successfully, although population numbers may decrease relative to the amount of cumulative habitat loss and disturbance from incremental development. Past and present actions in the mule deer CESA have resulted, or would result, in the direct disturbance of habitat. A portion of the cumulative disturbance areas have been, or would be, reclaimed or is currently recovering naturally (i.e. wildfire areas). The reclaimed areas, and areas associated with habitat conversion, would be capable of supporting wildlife use; however, species composition and densities may change. Other cumulative impacts include increased noise and additional human presence.

The Proposed Action adds approximately 219 acres of temporary disturbance, due to construction, of which about 137 acres is disturbance in intact sage brush habitat, which may take decades to recover. Approximately 0.24 acre of disturbance/habitat loss would remain as long as the pipeline continues to operate. In the context of cumulative impacts, the Proposed Action adds a small increment to habitat fragmentation (temporary during construction), habitat loss, and temporary animal displacement within the CESA. These added impacts are not a concern in a cumulative sense as they are primarily temporary and will not have any substantive impact on wildlife populations.

### **3.4.6 Special Status Species**

#### **Affected Environment:**

Special status species are those species for which state or federal agencies afford an additional level of protection by law, regulation, or policy. Eight special status species were identified as potentially occurring within the vicinity of the NEPP study area (NNHP 2011). These species, their associated habitats, and their potential for occurrence within the study area are summarized in Appendix B. Occurrence potential within the study area was evaluated for each species based on their habitat requirements and/or known distribution. Based on these evaluations, five special status wildlife species have been eliminated from detailed analyses. These species include

Lahontan cutthroat trout, western small-footed myotis, springsnails, long-legged myotis, and big brown bat. The six special status wildlife species identified as occurring within the project area and addressed in this EA are Greater Sage-Grouse (sage-grouse), pygmy rabbits, and burrowing owls, loggerhead shrike, sage thrasher, and Brewer's sparrow.

## **Federal Candidate Species**

### **Greater Sage-Grouse (*Centrocercus urophasianus*):**

The Project Area would be located within the Tuscarora Population Management Unit (PMU) which encompasses approximately 1,385,000 acres. Of this acreage, approximately 588,029 acres (42 percent) are considered to have intact sage-grouse habitat: a desirable plant species composition with sufficient, but not excessive, sagebrush canopy and sufficient grasses and forbs in the understory to provide adequate cover and forage to meet the seasonal needs of sage-grouse. The remaining 58 percent of the Tuscarora PMU has been characterized as follows: approximately 21 percent is characterized as perennial grassland and is dominated by habitat areas which lack sufficient sagebrush; approximately 21 percent is characterized as poor sagebrush habitat, with insufficient desired grasses and forbs to meet the seasonal needs of sage-grouse; approximately 9 percent is characterized as cheatgrass habitat which is currently dominated by annual grasses, forbs, or bare ground; and approximately 7 percent is characterized as a non-habitat area for sage-grouse (NNSG 2004).

Data indicate sage-grouse populations are still widely distributed throughout eastern Nevada in spite of recent wildfires and development. Vast areas of burned habitat may have fragmented some sage-grouse populations. Most burned areas still have sage-grouse populations using adjacent habitat that would be able to colonize back into these burn areas if they recover over the next 15 to 25 years. Additional uncontrolled wildfires in the future could exacerbate the habitat fragmentation problem in significant portions of Elko County. Trend lek counts are down over the long term (20 years). Strutting ground and harvest data indicate base populations of sage-grouse are low to moderate in the eastern Nevada region as compared to the late 1970's and early 1980's (NNSG 2004).

Following a full status review in 2005, the U.S. Fish and Wildlife Service (FWS) determined that the Greater Sage-Grouse was "not warranted" for protection. Decision documents in support of that determination noted the need to continue and/or expand all efforts to conserve sage-grouse and their habitats. In March 2010, the FWS published its decision on the petition to list the Greater Sage-Grouse as "Warranted but Precluded." 75 Fed. Reg. 13910 (March 23, 2010). Over 50 percent of the Greater Sage-Grouse habitat is located on BLM-managed lands. The FWS is scheduled to make a new listing decision in Fiscal Year (FY) 2015.

In the interim, the BLM has been provided guidance from the BLM's Washington Office (BLM 2012) to be applied to on-going and proposed authorizations and activities that affect sage-grouse and its habitat. This direction ensures that interim conservation policies and procedures are implemented when field offices authorize or carry out activities on public land while the BLM develops long-term conservation measures for the sage-grouse to be incorporated into applicable Land Use Plans. Currently, the Nevada Department of Wildlife, with assistance from the BLM, has finalized the Habitat Categorization Mapping for the Tuscarora PMU (NDOW



2012c). In response to the direction provided in WO IM No. 2012-043 (BLM 2012), the BLM, in cooperation with the Nevada Department of Wildlife, has prepared maps of Preliminary Priority Habitat (PPH) and Preliminary General Habitat (PGH) for nearly all Nevada. The areas are shown on Figure 3-7 and Figure 3-7.1. Identification of the areas relative to the location of the Proposed Action provides the constraints within which the BLM's Tuscarora Field Office must evaluate the project.

Because of current BLM policy, the impacts of the proposed action (or selected alternative), including Environmental Protection Measures (Section 2.1.4), plus any compensatory measures developed in cooperation with the proponent and the Nevada Department of Wildlife, must result in a finding that sage-grouse habitat would be "cumulatively maintained or enhanced" (BLM 2012c).

### **BLM Sensitive Species**

#### **Pygmy Rabbit:**

Pygmy rabbits (*Brachylagus idahoensis*) are typically found in areas of tall, dense big sagebrush cover and are highly dependent on sagebrush to provide both food and shelter throughout the year. Their winter diet consists of up to 99 percent sagebrush (USFWS 2011). Pygmy rabbit burrows are generally found in relatively deep, loose soils of wind-borne or water-born origin. In September of 2010, the US Fish and Wildlife Service determined that the pygmy rabbit does not warrant protection under the Endangered Species Act, however the Nevada BLM State Office has classified this species as sensitive, and Nevada Natural Heritage has categorized this species as vulnerable to decline.

Wildlife surveys in 2011 identified one pygmy rabbit colony near MLV#24 and three pygmy rabbit colonies near the northern end of the China Creek Alternative Segment. Relative to minor proposed pipeline re-routing since 2011, an additional survey is planned for completion in late spring to early summer of 2012.

#### **Burrowing Owls:**

The Western burrowing owl (*Athene cunicularia hypugaea*) breeds throughout Nevada. The majority of the breeding population migrates from northern Nevada during the winter months. However, observations of this owl have been recorded throughout Nevada during all months of the year. Breeding by burrowing owls is strongly dependent on the presence of burrows constructed by common fur bearers such as ground squirrels, or badgers. Prime burrowing owl habitat must be open, have short vegetation, and contain an abundance of burrows. Burrowing owls begin nesting in April, and young typically fledge by August. The Western burrowing owl has been designated by the BLM Nevada State Office as a sensitive species, and by Nevada Natural Heritage as vulnerable to decline.

One known nest site occurs approximately ¼ mile east of the Proposed Action alignment (Figure 3-7). Suitable foraging habitat exists within the study area.





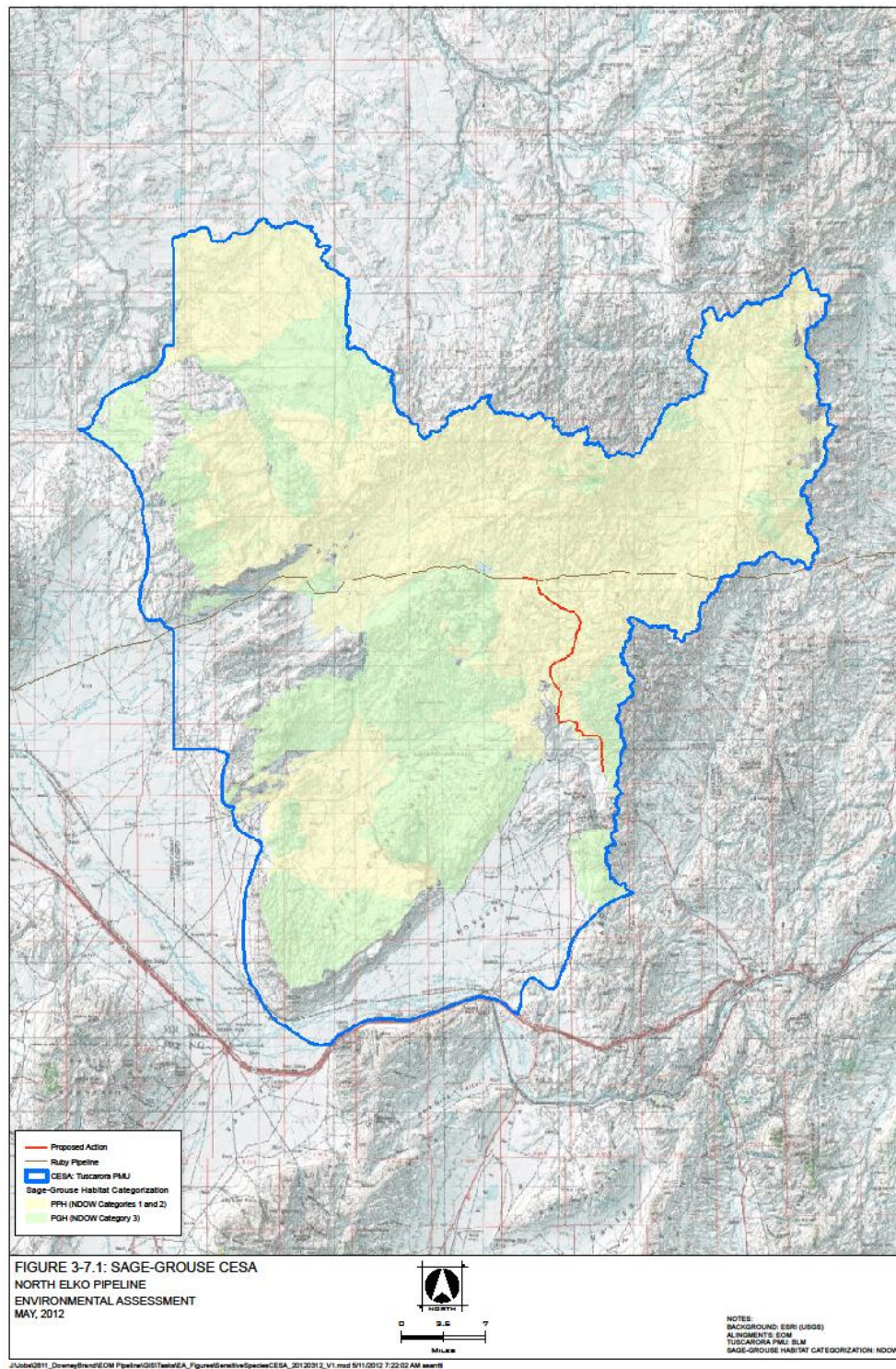


Figure 3-7.1 Sage-Grouse CESA

## **Other Sensitive Bird Species**

Loggerhead Shrike –Nesting and foraging habitat is provided in the area primarily by ecological sites characterized by the big sagebrush-bitterbrush, mountain, basin and Wyoming big sagebrush vegetation types. Foraging habitat is provided on sagebrush-grass areas with variable canopy cover of brush species. Loggerhead shrikes are commonly observed by BLM and NDOW personnel on intact sagebrush habitat areas on the Elko District.

Brewer's Sparrow – This species nests in the canopy of sagebrush within sagebrush grasslands. The area provides potential nesting and foraging habitat. This species was observed during wildlife surveys completed for the ROW route in 2011.

Sage Thrasher - This species nests in the canopy of sagebrush within sagebrush grasslands. The area provides potential nesting and foraging habitat. This species is commonly observed by BLM personnel during the summer period on intact sagebrush habitat areas on the Elko District.

## **Environmental Consequences:**

### **Greater Sage-Grouse:**

**Proposed Action:** Approximately twenty miles of the northern NEPP alignment falls within sage-grouse Preliminary Priority Habitat. The remainder falls within Preliminary General Habitat. The proposed pipeline route would be located within three miles of two active leks as shown on Figure 3-7 (above). There are several leks near the NEPP alignment which are not presently identified as active (NDOW 2012a).

The Proposed Action would produce temporary noise during construction and some noise from the operating equipment. Because all construction would take place outside the lekking and brood-rearing seasons as described in Chapter 2, the only concern related to noise is the potential impact of noise during operations. Noise levels associated with the Proposed Action would increase slightly over ambient noise levels being emitted from operation of the Ruby Pipeline. Per the Ruby Pipeline Final EIS, the increase in noise level at MLV#24, as a result of pipeline operation, is 4 to 8 dB attributed to a Model 8550 TEG. There would be no known noise impacts to active sage-grouse leks or nesting and brood-rearing habitat.

The only equipment required for operation of the proposed NEPP Willow Creek Meter Station that has potential for generating noise on public land is a thermoelectric generator (TEG). The Willow Creek Meter Station, including the TEG, would be located approximately twenty feet to the south of the Ruby Pipeline Main Line Valve 24 (MLV#24). PPC has selected pipeline operation and monitoring equipment to minimize pipeline operation noise. PPC's Model 8550 TEG, located at least 10 feet from all sides of the fenced enclosure (chain link fence with vinyl slats to BLM Slate Green color specs) would provide the source of power for the electronics and monitoring telemetry at the Willow Creek Meter Station (WCMS). This TEG model would limit new noise emissions to less than 8 dB at 3 feet, and 0 dB at 9 feet of the TEG. There is no other noise source associated with the proposed action.

The 4 to 8 dB attributed to the existing Ruby MLV#24 or the level of 0 dB at 9 feet for the proposed NEPP TEG at the WCMS would not exceed the recommended threshold of 10 dB over the ambient noise level. Vinyl fence slats would help to further reduce noise levels on surrounding habitat outside the fenced area. Therefore no impact to sage-grouse from noise is expected.

Within the Project Area there are approximately 85 acres of existing disturbance in PPH and approximately 15 acres in PGH, primarily due to wildfire damage. The Proposed Action would result in temporary, to long-term disturbance of 119 acres in PPH and 4 acres in PGH. The NEPP would result in a long-term loss, or a permanent loss (depending upon success of reclamation efforts) of approximately 10,450 square feet (approximately 0.24 acre) of sage-grouse habitat from construction of the WCMS and the Coyote Creek Station. The site of the Goldstrike Meter Station is private land within the Goldstrike Mine operations area and is already disturbed from mining operations. The land at the site of the WCMS was disturbed during construction of the Ruby Pipeline and is in reclamation.

Based on proposed reclamation and seeding of temporary disturbance from construction (Appendix A), the Proposed Action would result in an approximate 0.24 acres of permanent disturbance equal to less than 0.0001 percent of the acreage within the Tuscarora PMU.

The measures described in Section 2.1.5 would be adequate to “cumulatively maintain or enhance sage-grouse habitat” as required by WO IM No. 2012-043.

**No Action Alternative:** Under the No Action Alternative, the NEPP would not be constructed. There would be no new disturbance to intact sage-grouse habitat. Existing areas in disturbed land surface types (96 acres) would not be reclaimed by the proposed NEPP. Compensatory measures to benefit sage-grouse as outlined in Section 2.1.5, resulting from this project, would not occur.

#### **Pygmy Rabbit:**

**Proposed Action:** Construction of the NEPP is not expected to start until August 1 and would therefore avoid direct impact to pygmy rabbits and their habitat during breeding and birthing timeframes. Pygmy rabbit surveys were completed in 2011 with additional surveys planned in late spring to early summer of 2012 due to pipeline re-route since 2011. During construction, any burrows that were not located during surveys could be destroyed and individuals could be killed. Clearing the ground before excavation begins is expected to scare the rabbits away from the cleared areas, thereby minimizing the potential for death as a result of excavating into occupied burrows. Excavation and backfill might create a minor benefit in areas of existing burrows by providing churned soils that could be easier to burrow into. Reclamation and seeding could benefit pygmy rabbit by providing additional forage (new seedlings) during the following spring in the areas reclaimed by the project. The construction of temporary construction fencing to protect sensitive areas, as provided for in Section 2.1.4, could help to minimize impacts.

**No Action Alternative:** Under the No Action Alternative, the NEPP would not be constructed. There would be no new disturbance to pygmy rabbit habitat associated with the NEPP proposed

action or alternative route segment.

**Burrowing Owl:**

**Proposed Action:** Burrowing owl surveys were completed in 2011, with additional surveys planned in late spring to early summer of 2012 (due to pipeline re-route since 2011). Construction of the NEPP would not start until August 1 and would therefore avoid direct impacts to Western burrowing owls and their habitat during nesting. Since no occupied sites were identified during survey in the areas that will be disturbed, it is unlikely that any birds would be impacted. Surveys in 2012 could confirm the same results and are pending. However, it is possible that birds could be killed if they took refuge in any existing burrows that were then disturbed by excavation operations. In the event that occupied burrows are identified during the 2012 survey or construction, temporary construction fencing or signage to protect sensitive areas, as provided for in Section 2.1.4, could help to minimize impacts.

Openings in intact sagebrush/grasslands vegetation, loose soils and successful reclamation including establishment of perennial shrubs, grasses and forbs as part of the ROW project, could provide habitat for mammals that create burrows. Abandoned burrows could, in turn, provide suitable roosting and nesting habitat for burrowing owls with foraging habitat on the ROW and surrounding landscape.

**No Action Alternative:** Under the No Action Alternative, the NEPP would not be constructed and there would be no new disturbance to Western burrowing owl habitat associated with the NEPP.

**Loggerhead Shrike, Brewer's Sparrow, and Sage Thrasher**

The 1999 Nevada Partners in Flight – Bird Conservation Plan includes Loggerhead Shrike and Sage Thrasher as “Other” species associated with the Sagebrush Habitat Type and Brewer's Sparrow as an “Associated Species.” The Greater Sage-Grouse (sage-grouse) mentioned above, is a candidate species as of March 5, 2010. This species is considered an “umbrella species” where positive or negative impacts to their habitat generally affect the habitat for other sagebrush-obligate species or other species such as loggerhead shrike, Brewer's sparrow and sage thrasher that utilize similar upland habitat areas on a seasonal or yearlong basis. Therefore, the Environmental Consequences for Proposed Action and No Action Alternatives, and Cumulative Effects analysis for sage-grouse would be used to help analyze habitat impacts to these species.

**Cumulative Effects:**

**Greater Sage Grouse:**

The CESA for Greater Sage-Grouse is the Tuscarora PMU (Figure 3-7.1 above), which includes 1,385,000 acres of public and private lands. Wildfire has been had the greatest impact on sage-grouse habitat with thousands of acres burned since 2005 with the latest large scale wildfire, the Indian Creek Wildfire, burning in October 2011. The wildfires, together with other actions in the PMU, such as: mining, mineral exploration, geothermal development, existing and new transmission lines and ROWs, and the Ruby Pipeline directly impact sage-grouse habitat through loss of cover and forage, habitat fragmentation, increased access by humans, and increased



predation. A number of actions are improving sage-grouse habitat conditions, including extensive reseeding and restoration work on wildfire damaged land and increasing use of technology, such as perch deterrents and sound reduction. Because BLM guidance requires the proposed action, including compensatory measures, to maintain or enhance sage-grouse habitat, and the only impacts to sage-grouse from the proposed action are impacts to habitat, there are no cumulative impacts of concern.

#### **Pygmy Rabbits:**

The CESA for pygmy rabbits is also the Tuscarora PMU. The CESA for pygmy rabbits is also the Tuscarora Sage –Grouse PMU. In regard to being a sagebrush-obligate, impacts from cumulative effects would be similar to what has occurred for sage-grouse.

Considering the following, cumulative impacts related to the project would be minimized or of no concern on the CESA area:

- The impacts of the project would be minimal on known active pygmy rabbit colonies on the project ROW and surrounding project survey area,
- Reclamation efforts would be completed with native shrubs, grasses and forbs that would help to provide cover and forage after construction, and
- Sage-grouse habitat compensatory measures (including proposed sagebrush seeding/planting efforts) could also benefit pygmy rabbits.

#### **Burrowing Owls:**

The CESA for burrowing owls is also the Tuscarora PMU. Given that construction for the NEPP would not start until August 1, and it seems unlikely that any burrowing owls would be harmed by the project, there are no cumulative impacts of concern related to the NEPP.

#### **Loggerhead Shrike, Brewer's Sparrow, and Sage Thrasher**

Per narrative for these species under Subsection 3.4.6, see Greater Sage-Grouse under Cumulative Effects shown above.

### **3.4.7 Vegetation including Riparian Zones**

#### **Affected Environment:**

Figure 3-8 shows the USGS classification for vegetation in the general area of the proposed pipeline. Appendix D provides detailed maps with status of vegetation within the study area. Note that portions of the study area without added color are not disturbed by any activities other than grazing. Portions of the study area were surveyed by SRK in the summer of 2011, and all areas in natural drainages where construction is proposed would be surveyed in the spring of 2012. Approximately 744 acres of the study area have been disturbed by previously permitted exploration activity including roads and drill pads, wildfires from 2005 and later, pipeline and transmission line construction, and mining activities. Smaller scale disturbances from recreation and ranching are likely though not positively identified. Vegetation on the undisturbed portion of the proposed NEPP study area is typical of upland Great Basin sagebrush/bunchgrass plant community. Major vegetative species present in undisturbed areas include: mountain big sagebrush (*Artemisia tridentata vaseyana*), Wyoming big sagebrush (*Artemisia tridentata*

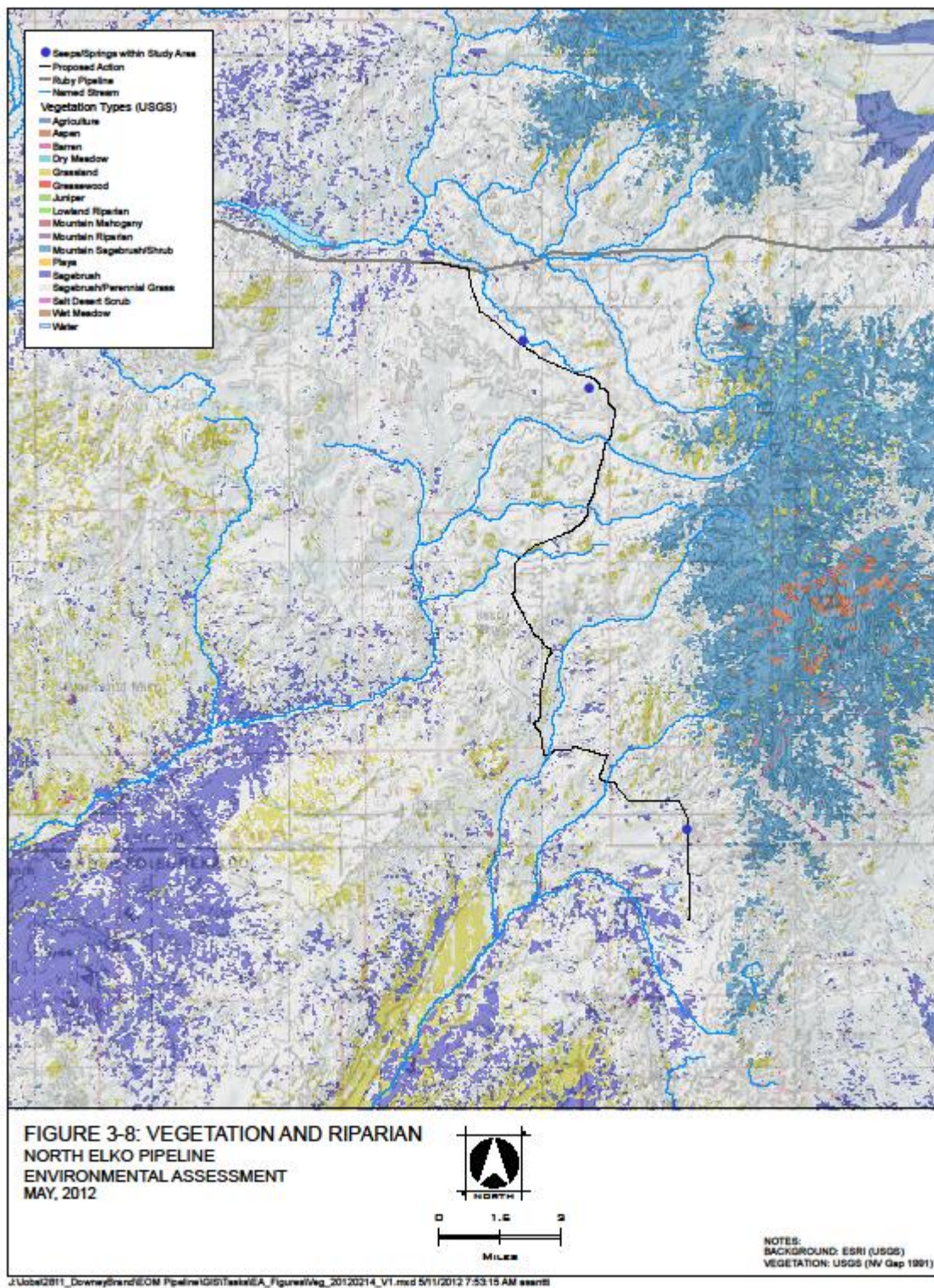


Figure 3-8. Vegetation and Riparian

wyomingensis), low sagebrush (*Artemisia arbuscula*), black sagebrush (*Artemisia nova*), Douglas rabbitbrush (*Chrysothamnus vicidiflorus*), spiny hopsage (*Grayia spinosa*), Sandberg bluegrass (*Poa Sandbergii*), bottlebrush squirreltail (*Elymus elmoides*), bluebunch wheatgrass (*Pseudoroegneria spicata*), Thurber's needlegrass (*Achnatherum thurberianum*), Indian ricegrass (*Achnatherum hymenoides*), lupine (*Lupinus spp.*), arrowleaf basalmroot (*Balsamorhiza sagittata*), phlox (*Phlox spp.*), and aster (*Aster spp.*). No tree dominant plant communities are present in the study area (SRK 2011). Vegetation on areas damaged by wildfire (shown as burned on Figures 3-2.2 through 3-2.14) is recovering, both from natural revegetation and from reclamation and restoration efforts by the BLM and others. The wildfire damaged areas will take many years, perhaps decades, to recovery the habitat values that existed before the wildfire.

Plants associated with Antelope, Squaw, Boulder, Bell and Brush Creeks included curly dock (*Rumex crispus*), bog geranium (*Geranium palustre*), mugwort (*Artemisia vulgaris*), nettle (*Urtica spp.*), speedwell (*Veronica spp.*), and common monkey flower (*Mimulus guttatus*), biscuitroot (*Lomatium spp.*), least phacelia (*Phacelia minutissima*), sego lily (*Calochortus nuttallii*), sagewort (*Artemisia frigida*), common yarrow (*Achillea millefolium*), wild onion (*Allium crispum*), watercress (*Nasturtium officinale*), sedge (*Cares spp.*), Baltic rush (*Juncus balticus*), western wheatgrass (*Pascopyrum smithii*), basin wildrye (*Leymus cinereus*), bluegrass (*Poa spp.*), bottlebrush squirreltail (*Elymus elmoides*), crested wheatgrass (*Agropyron cristatum*), and cheatgrass (*Bromus tectorum*). coyote willow (*Salix exigua*), serviceberry (*Amelanchier alnifolia*), big sagebrush (*Artemisia tridentata vaseyana*), black willow (*Salix nigra*), Wood's rose (*Rosa woodsii*), rabbitbrush (*Chrysothamnus vicidiflorus*), bitterbrush (*Purshia tridentata*), lamb's quarters (*Chenopodium album*), and prickly lettuce (*Lactuca serriola*). Invasive, non-natives included bull thistle (*Cirsium vulgare*) and scotch thistle (*Onopordum acanthium*).

Special status species of plants with potential to occur in the vicinity of the NEPP Project Area include Lewis buckwheat (*Eriogonum lewisii*), Grimes vetchling (*Lathyrus grimesii*), least phacella (*Phacelia minutissima*), cactus (*Cactus spp.*), and Lieberg clover (*Trifolium leibergii*). Based on data base query results from the NNHP (2011) there are no known occurrences of special status plant species within the NEPP Project Area.

### **Environmental Consequences:**

#### **Proposed Action:**

Approximately 137 acres of undisturbed upland and 4 acres of riparian habitat in the Project Area would be disturbed from NEPP construction. Approximately 105 acres of upland within the Project Area are disturbed due to roads, mining activity, or wildfire damage.

The proposed concurrent reclamation and seeding plan would reclaim to a desired plant community and wildlife habitat approximately 219 acres of the total proposed disturbance of 246 acres. The difference is 27 acres of existing roads. Approximately 10,450 square feet (approximately 0.24 acre) associated with the Willow Creek Meter Station and Coyote Creek MLV would be stabilized but not reseeded to allow for the placement and operation of meter station equipment. The approximately 27 acres of existing roads would be left in a stabilized condition but not reclaimed to allow for continued use. The proposed Reclamation Plan (Appendix A) includes specifics for reclamation treatment of riparian habitat.

With the exception of areas revegetated with sagebrush, concurrent revegetation during construction would likely be reestablished with vegetation cover within three to five years. Details outlining vegetation efforts will be provided in the POD, and will include factors such as: expected percentage of vegetation to be restored within acceptable timeframes (i.e. 80% restoration within five years), protocol(s) for coordinating with livestock permittees such that livestock are prohibited from using revegetated areas until restoration is considered by BLM to be able to withstand grazing, etc.), and plans for action in the event restoration efforts are not satisfactory to BLM within a given timeframe. Sagebrush requires a longer period of time to reestablish. Reclaimed areas would be first dominated by grasses with low densities of native forbs and shrubs. Big sagebrush, a dominant shrub in the study area, would likely be present at lower densities following construction, but then gradually recover.

The Proposed Action would implement the Reclamation Plan (Appendix A) that was developed in close coordination with the BLM. The Reclamation Plan includes provisions for monitoring and remedial measures to ensure successful reclamation.

The Proposed Action would cross several drainages. The construction methods described in Chapter 2 are intended to minimize impacts but impacts will occur. An estimated four acres of riparian vegetation would be removed by pipeline construction. This vegetation is likely to recover quickly as the narrow footprint of the project would allow natural reseeding by adjacent undisturbed vegetation in riparian areas. Only one drainage feature that the NEPP would cross, Bell Creek, has any likelihood of having surface flow during the NEPP construction season (August 1 – November 15).

Implementation of the Environmental Protection Measures for Soils and Vegetation (Section 2.1.4) would allow PPC flexibility for safe construction as well as maximizing protection of riparian resources at each of these proposed crossings. In the spring of 2012, PPC would contract with a qualified plant ecologist to visit each proposed drainage feature crossing and assess channel characteristics and riparian plant community species. This assessment would be used by PPC to provide site specific design for each proposed crossing.

The Proposed Action includes measures to control the introduction and spread of noxious weeds, which should benefit the revegetation of disturbed areas by native species.

**No Action Alternative:**

Vegetation resources would not be affected since construction of the NEPP would not occur. Approximately 96 acres in the Project Area would remain in the current disturbed state attributed to wildfire effects, roads and mineral exploration.

**Cumulative Effects:**

The Cumulative Effects Study Area for vegetation includes areas within the three hydrographic basins that the project would pass through. There are no cumulative impact issues of concern to vegetation in general. The Cumulative Effects Study Area for riparian vegetation is the Boulder Flat-061 hydrographic basin as the only substantive likely impacts to riparian vegetation from the proposed project are within that basin (Figure 3-8.1). Within the CESA there are no current



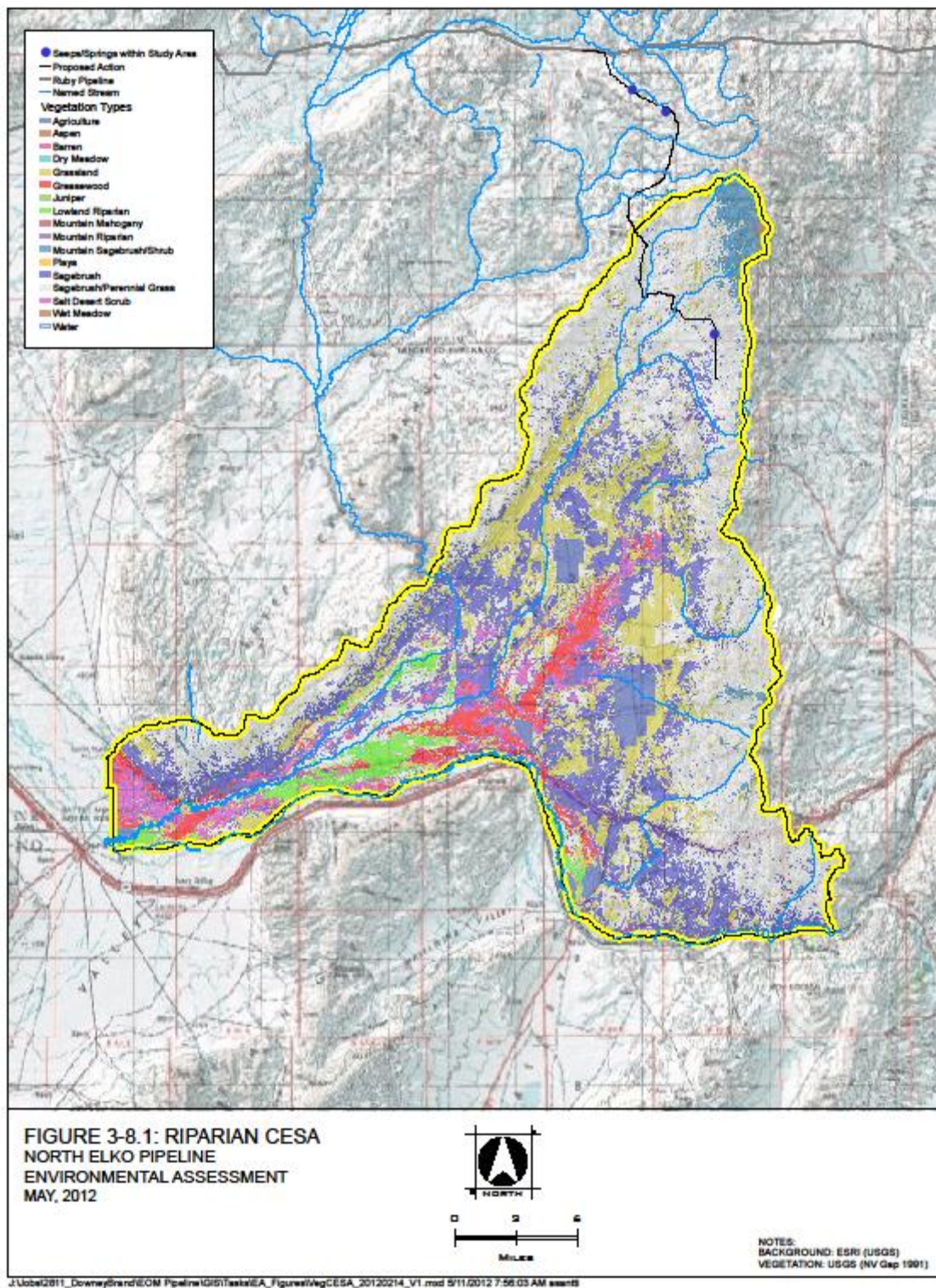


Figure 3-8.1. Riparian CESA

quantified evaluations of overall riparian habitat. There is extensive modification to pre-European settler riparian conditions due to grazing, wildfire (noting that wildfire is a normal part of the ecology but wildfires in the last 10 years have impacted much greater acreages, on average, than prior years), mining activities including dewatering, and many other human uses including roads (culverts, erosion) as well as recreation such as ATVs and other vehicles in low water crossings and meadow areas. Regarding projects like the pipeline, temporary disturbance in riparian areas, followed by reclamation and revegetation, and in some cases protection from use by herbivores, usually results in acceptable revegetation in the next growing season, or two, in contrast to sage brush uplands which can take many years to recover. There are no threshold issues which would cause cumulative impacts on riparian vegetation to be an issue of concern.

### **3.4.8 Visual Resources**

#### **Affected Environment:**

The BLM's visual resource management (VRM) provides a method to inventory and analyze scenic values. The VRM system helps to ensure that actions taking place today will benefit the visual qualities associated with BLM landscapes, while protecting those visual resources for the future.

VRM classes are assigned based on the visual resource inventory, as well as consideration for other uses. The inventory consists of 1) a Scenic Quality Evaluation, 2) a Sensitivity Level Analysis, and 3) a Delineation of Distance Zones. Each VRM Class has been assigned a management objective.

The proposed NEPP would be largely located in VRM Class IV. BLM policy for activities/actions in VRM Class IV designated public land allows major modification of the existing character of the landscape. A smaller portion of the proposed NEPP would be located in VRM Class III where the BLM's management objective is to partially retain the existing character of the landscape. In VRM Class III designated areas, the level of change to the characteristic landscape should be moderate.

To minimize visual changes to the landscape, the facilities at the Willow Creek Meter Station and the Coyote Creek Station, within the chain link fenced enclosure, would be painted BLM's color palette "Shale Green". The chain link fence would be unpainted galvanized steel. Prior to construction this initial determination will be reviewed to determine if a different palette color is more appropriate for the immediate landscape.

#### **Environmental Consequences:**

##### **Proposed Action:**

The proposed NEPP above ground facilities to be located on public lands (the Willow Creek Meter Station) would be located near existing above ground facilities associated with the Ruby Pipeline MLV#24 on public lands designated VRM Class IV. Construction for new facilities (approved by BLM and stated in POD) would comply with the appropriate VRM requirements, as well as other related S&G's or other applicable regulations.



Portions of the underground pipeline will pass through VRM Class III. Other than small signs to mark the location of the pipeline, it is expected that there will be no indication of the pipeline's existence after revegetation is complete; see POD for expected dates of restoration and alternate plans of action should delays be encountered (i.e. late or postponed construction, drought, etc.). The new facilities and pipeline would be in compliance with the management objectives for VRM for those locations. Painting the equipment in the enclosures to reduce reflection and color contrasts would reduce the visual impact of the facilities.

#### **No Action Alternative:**

Under the No Action alternative the NEPP above ground facilities would not be constructed and there would be no change to the character of the visual quality of the area initiated by the Proposed Action Alternative. The area is expected to continue being developed, as permitted by BLM, with activities similar to those occurring presently (i.e. mining, exploration, ROW's etc.).

#### **Cumulative Effects:**

The CESA for visual impacts is the viewshed from the proposed NEPP route. The viewshed includes access roads, mining facilities including waste rock storage facilities, heap leach pads, process and administration buildings, and large tailings dams, as well as several electric transmission lines. The proposed mining expansion activities described above would be an expansion of the existing visual features located in the CESA. Presently the CESA can be described as a semi-mountainous sagebrush steppe with characteristics common to areas exposed to activities associated with large mining endeavors. The visual impacts of the proposed NEPP are consistent with the existing mining features, although trivial in comparison to those mining features and transmission lines. There are no cumulative impact concerns related to the Proposed Action or alternative.

### **3.4.9 Socio-Economics**

#### **Affected Environment:**

The 2010 population of Elko County according to the US Bureau of the Census was 48,818 (<http://quickfacts.census.gov/qfd/states/32/32007.html>). In 2007, there were more than 21,000 employees in Elko County (BLM, 2010). The economy of Elko County is primarily dependent on mining. More than three-quarters of the Elko County population lives in the micropolitan area of Carlin, Elko, Spring Creek, and unincorporated adjacent rural developments. Within that area, more than two-thirds of the wages are directly and indirectly a result of mining activity (BLM, 2010). Agriculture, primarily stock raising and hay operations, is a distant second in terms of contributions to the economy. The average family income in Elko County was more than \$59,000 in 2009 compared to a bit more than \$50,000 for the average family income in Nevada. (<http://www.city-data.com/income/income-Elko-Nevada.html>).

The pattern noted above has continued to the present, with Elko County being at the top of the average family income for counties in Nevada. Unemployment, as of January 24, 2012, was 6.8%, much lower than the average unemployment of 12.6% in the state of Nevada (EFDP, 2012). Temporary construction projects are common to the area, including mine development and infrastructure projects. A geothermal plant and transmission line were constructed during the latter half of 2011, employing up to 100 during construction. The most notable recent

construction project was Ruby Pipeline which employed hundreds during construction across Elko County from east to west. Many of those employees were based in Elko during the construction period of 2010 to the summer of 2011.

### **Environmental Consequences:**

#### **Proposed Action:**

Compared to mine development and the Ruby Pipeline, the proposed pipeline project would be a relatively small project. Economics associated with employing an expected 40 to 50 employees during the 3-5 month construction period would be easily absorbed by the Elko economy. Because much of the equipment for the pipeline operation would be automated, permanent employment for the pipeline itself is only expected to result in one full-time person for several months following completion of the pipeline, declining to a likely half-time position during the remaining lifetime of the pipeline. Annually, PPC expects to employ 2-3 persons for 2-4 weeks each to conduct onsite inspections of the pipeline and to complete regular maintenance.

The proponent expects employees, during construction, to reside in local cities such as: Carlin, Elko, or Spring Creek, or in trailer camp sites or in motor homes at one of the many existing commercial campground locations in Elko County. Rental vacancies are often limited in Elko (city), largely due to the strength of the mining industry in the area and lower unemployment rates than are being experienced in other Nevada counties. New apartments are planned to accommodate mining personnel, but are unlikely to be available for rent in 2012. Home sales are also available in Elko, Carlin, and Spring Creek, but sales may not be affected during construction due the short-time frame (3-5 months) required for the project to be developed. Other venues for lodging include motels offering daily, weekly, and monthly rates; all of which are more likely to have vacancies toward fall and winter as opposed to spring and summer months. Overall, availability for housing is not expected to be a limiting factor for securing the personnel needed to complete the NEPP.

On average, nine propane deliveries are made daily to the Goldstrike Mine. The nine deliveries to the Goldstrike Mine would be eliminated once the NEPP is completed and operable; thus resulting in a decreased need for propane deliveries and delivery associated costs.

Based on current commodity prices and current production schedules at Goldstrike, the NEPP would be expected to provide a 52% reduction in energy costs for Barrick's Goldstrike operations. It would not be practical to quantify estimated employment impacts of the conversion to natural gas from propane as such an estimate would require too many assumptions regarding the price of fossil fuels in general and the comparative price of natural gas versus propane in particular.

Based on a Conceptual Tax Obligation calculation summary prepared by PPC, sales and use tax applicable to the parts and materials used on the NEPP and an annual property tax based on the fully capitalized construction cost have been estimated. For sales tax, one-third of the cost would be for parts and materials subject to sales tax for Elko and Eureka Counties. Property tax was estimated based on total construction cost, plus sales tax to calculate the Taxable Value with an Assessed Value of 35 percent of the Taxable Value. The property tax rate for both counties was estimated based on the average county-wide tax rate of 2.9078 percent

(<http://www.nvenergy.combusiness/economicdevelopment/county/elko/busoverview.cfm>).

Conceptual Tax Obligations are summarized below in Table 5.

Table 5. Conceptual Tax Obligations

Year	Item	Elko County	Eureka County	Total
2012	Sales & Use Tax	\$297,975	\$44,525	\$342,500
2013 – beyond	Property Tax	\$138,900	\$17,246	\$156,145
	Sales & Use Tax	\$1,541	\$171	\$1,713
	<b>Totals</b>	<b>\$140,441</b>	<b>\$17,417</b>	<b>\$157,858</b>

**No Action Alternative:**

Under the No Action Alternative there would be no temporary increase in short term employment associated with construction of the proposed pipeline. Elko and Eureka Counties would not realize the Conceptual Tax Obligations summarized in Table 5. There would be no impacts to the local propane industry.

**Cumulative Effects:**

Other than continued mine development along the Carlin Trend, there are no other major construction activities expected to occur during the anticipated construction period of the North Elko Pipeline Project. Therefore, the project, if constructed, would continue the pattern of short-term construction projects that have been common in the county for the last 30 years with no substantive conflict for housing or infrastructure with any other ongoing construction project. Because the pipeline project has a very small temporary construction and permanent employment impact on Elko County, it would not contribute measurably to cumulative impacts, in contrast to the new and expanded mining operations at the various mines in and adjacent to Elko County. The proposed pipeline would simply help maintain the existing level of economic activity (BLM, 2010).

### **3.4.10 Climate Change**

**Affected Environment:**

The potential impacts of “greenhouse gas” (GHG) emissions including carbon dioxide, methane, nitrous oxide, water vapor, and several trace gasses are the subject of on-going scientific research. On a regional and global scale GHG emissions are thought to cause a net warming effect of the atmosphere essentially through insulation. Along with variations in climatic conditions over millennia, GHG levels are thought to vary correspondingly. Across the Earth’s surface, industrialization and burning of fossil carbon sources have resulted in increased concentrations which may contribute to overall climatic changes.

Given the varied locations and inconsistency in measurements globally, it would not be possible to determine the spatial and temporal variability and change of climatic conditions as a result of GHG emissions. However, some scientists believe global mean surface temperatures have increased nearly 1°C (1.8°F) over the past 100 years. In addition, predictive models indicate that average temperature changes are likely to be greater in the Northern Hemisphere. Warming

during the winter months is expected to be greater than during the summer, and increases in daily minimum temperatures would be more likely than increases in daily maximum temperatures.

Precise assessment of GHG emissions and climate change for individual localized activities, such as the NEPP, is in its formative phase. It is not currently possible to predict with confidence either the net impact to climate as a result of the NEPP or the impact of climate change on the NEPP project area during the coming years. The lack of scientific tools designed to predict climate change on regional or local scales limits the ability to quantify potential future impacts for an individual activity. In addition, the BLM does not currently have established thresholds for evaluating such impacts. Climate of the study area is typical of the Great Basin high desert with cold, wet winters with precipitation heaviest in the fall, winter, and spring (November through May) and hot, dry summers, when precipitation is lightest (June through October) (Western Regional Climate Center [WRCC] 2009).

### **Environmental Consequences:**

#### **Proposed Action:**

Construction of the NEPP would be a temporary source of air pollutants including NO<sub>x</sub>, CO, CO<sub>2</sub> and fugitive dust. The primary source of these emissions would be exhaust from diesel powered construction equipment and disturbed soil surfaces. Based on the equipment listed in Table 3 (Section 2.1.2), it is conservatively estimated that over a period of 5 months the NEPP construction activities would be the source of approximately 31.6 tons of NO<sub>x</sub>, 183.4 tons of CO, 31,489 tons of CO<sub>2</sub>, and 6 tons total PM<sub>10</sub> particulate matter. Control of gaseous emissions from diesel engines would be minimized through proper operations and maintenance of equipment. Production of fugitive dust would be minimized through use of water trucks dedicated to access routes used for daily employee transportation and materials deliveries and for work areas. Upon completion of construction all measurable sources of air pollutants would be gone. Operation and maintenance of the NEPP would not result in measurable emissions. Elimination of trips to supply propane to the mine would reduce truck emissions compared to the existing situation.

#### **No Action Alternative:**

Potential impacts resulting from implementation of the Proposed Action to climate change and greenhouse gas emissions would be avoided with selection of the No Action Alternative.

### **Cumulative Effects:**

The CESA for GHG and climate change is worldwide. Given the temporary nature of construction of the NEPP relative to larger ongoing permitted activities in the area, the NEPP is expected to result in negligible incremental impact related to Greenhouse Gas Emissions. There is no cumulative impact issue of concern related to this project.

## **4. MONITORING AND MITIGATION**

All mitigation and compensation measures proposed by the BLM and NDOW to reduce potential impacts and to compensate for expected impacts from the NEPP have been included in the proposed action as set forth in Chapter 2 of this EA. Therefore no mitigation or mitigation monitoring is described in this Section. Please refer to Appendix A regarding monitoring for reclamation success.

## **5. CONSULTATION AND COORDINATION**

This EA was prepared by a third party contractor (Wood Rodgers, Inc.) under the guidance of the BLM and in coordination with other local, state, federal, and tribal personnel. Preparation included review of agency files, field surveys, and review of supporting documentation. BLM also issued a press release that was printed in the local newspaper, The Elko Daily Free Press. The press release solicited public comment. Four comments were received. None were substantive.

### **5.1 Persons, Groups, Tribes and Agencies Consulted**

The following persons, groups, and agencies were contacted during the preparation of this EA.

Elko County Planning and Zoning, and Natural Resources Division – Randy Brown  
Eureka County Department of Natural Resources – Jake Tibbits  
Eureka County Assessor – Michael Mears  
Nevada Department of Wildlife – Alan Jenne, Shawn Espinosa, Chett VanDellan  
Nevada Natural Heritage Program  
Nevada Department of Transportation, District III - Michael Murphy  
Nevada Department of Agriculture – Tina Mudd  
United States Fish and Wildlife Service – Marcy Haworth  
Newmont Mining Corporation  
Barrick Gold of North America, Inc.  
Bamco Corporation  
NV Energy  
Dean and Sharon Rhoads  
26 Ranch, Inc.  
Newmont USA Limited/Elko Land and Livestock Company  
Homestake Mining Company of California  
Barrick Goldstrike Mines

Native American Consultation: Section 3.2.2 of this EA describes the Native American consultation process for this project. To initiate consultation and request information, comment, issues, and concerns, on February 16, 2012, the BLM sent letters describing the proposed project to the tribes and organizations listed below.

Confederate Tribes of the Goshute Indian Reservation  
Elko Band Council  
Shoshone Paiute Tribes of the Duck Valley Indian Reservation  
Wells Band Council  
Te-Moak Tribe of Western Shoshone  
Battle Mountain Band Council  
South Fork Band Council  
Duckwater Shoshone Tribe  
Yomba Shoshone Tribe  
Ely Shoshone Tribe  
Bureau of Indian Affairs  
Western Shoshone Descendants of Big Smoky



Western Shoshone Defense Project  
Western Shoshone Committee

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Jerri Bertola - Grazing and Range, Vegetation  
Bryan Mulligan – Noxious Weeds  
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John Daniel – Soil, water, and air quality  
Carol Evans – Wetlands and Riparian Areas  
Bill Fawcett - Cultural Resources  
Gerald Dixon – Native American Concerns  
Zack Pratt - Recreation, Visual Resource Management, Wilderness Review  
Steve Craddock – Land Use  
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Leslie Burnside, Associate Environmental Specialist  
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## 6. REFERENCES

BLM (Bureau of Land Management).

\_\_\_\_ 2003. BLM Nevada Migratory Bird Best Management Practices for the Sagebrush Biome.

\_\_\_\_ 2007. Draft Supplemental Environmental Impact Statement Leeville Project Cumulative Effects. BLM Elko District Office. August 31, 2007.

\_\_\_\_ 2008a. National Environmental Policy Act Handbook H-1790-1.

\_\_\_\_ 2008b. Draft Supplemental Environmental Impact Statement: Betze Pit Expansion Project.

\_\_\_\_ 2010. Draft Environmental Impact Statement for the Genesis Project, Elko District Office, Elko, Nevada

\_\_\_\_ 2012. Instruction Memorandum No. 2012-043. Greater Sage-Grouse Interim Management Policies and Procedures.

\_\_\_\_ 2012a. Tuscarora Field Office GIS. 2011 Fires, Fire History, Received January 2012

\_\_\_\_ 2012b. Tuscarora Field Office GIS. Vegetation Treatments, Received January 2012

\_\_\_\_ 2012c. Nevada State Office, BLM, email dated 3/27/2012

EFDP. 2012. Elko Daily Free Press, January 24, 2012, page A3

Hershler, Robert. 1998. A Systematic Review of the Hydrobiid Snails (Gastropoda: Rissooidea) of the Great Basin, Western United States. Part 1. Genus Pyrgulopsis

Microsoft Virtual Earth: <http://maps.live.com>, Image courtesy of NASA, (c) Harris Corp, Earthstar Geographics LLC, Image courtesy of USGS, (c) EarthData, (c) Getmapping plc, (c) 2008 GeoEye, (c) 2005 Pasco, (c) GeoContent / (p)Intergraph, (c)2007 TerraItaly, (c)2007 Intermap, Image courtesy of the IndianaMap, Image courtesy of the Nevada State Mapping Advisory Committee, (c) 2007 InterAtlas, (c) 2008 Eurosense, (c)2008 IGP, (c)2008 IGN

NDOW (Nevada Department of Wildlife).

\_\_\_\_ 2012a. GIS Data Base Query Results.

\_\_\_\_ 2012b. 2010-2011 Big Game Status Report.

\_\_\_\_ 2012c. Greater Sage-Grouse Habitat Categorization Mapping Now Available. Web source: <http://www.ndow.org/about/news/pr/2012/March/sagegrouse.shtm>. Site visited 6/13/2012.

NNHP (Nevada Natural Heritage Program). 2011. Data Base Query Results.

NNSG (Northern Nevada Stewardship Group). 2004. Elko County Sagebrush Ecosystem Conservation Strategy

NRCS (U.S. Department of Agriculture, Natural Resources Conservation Service). 2006. Soil Survey Geographic (SSURGO) database for Northwest Elko County Area, Nevada, Part of Elko and Eureka Counties, and Soil Survey Geographic (SSURGO) database for Tuscarora Mountain Area, Nevada, Parts of Elko, Eureka, and Lander Counties, 12/13/2006

SRK (SRK Consulting (U.S.), Inc.). 2011. EOM North Elko Pipeline Biological Baseline Survey Report.

USFWS (United States Department of the Interior Fish and Wildlife Service).

\_\_\_\_\_. 2010. Federal Register Filing. Endangered and Threatened Wildlife and Plants; 12-Month Findings for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered. 13910. Vol. 75, No. 55. March 23. Proposed Rules.

\_\_\_\_\_. 2011. Pacific Southwest Region. [www.fws.gov/nevada/nv\\_species/pygmy\\_rabbit.html](http://www.fws.gov/nevada/nv_species/pygmy_rabbit.html)

WRCC (Western Regional Climate Center). 2009. Climate Observations and Trends. Water and Climate Change Adaptation Symposium: From the Sierra to the Ocean. Long Beach, CA. 2010.